



September 3, 2014

Via Email and Hard Copy

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

RE: Recology Hay Road, Central Valley Regional Water Quality Control Board,
Submission for October 9-10 Public Hearing

Dear Ms. Wyels:

Enclosed please find the following submittals in the Recology Hay Road matter:

- 1) Recology's Response to the Prosecution Team's Legal and Technical Analysis;
- 2) Recology's Proposed Time Schedule Order (which shows in redline/strikeout format text changes proposed by Recology to the Regional Board Staff's tentative Cease & Desist Order, Revision 2 dated August 25, 2014);
- 3) Recology's Witness List; and
- 4) Recology's Exhibit List.

A hard copy of these documents is also being provided to the Advisory Team's primary contact and attorney.

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

Sincerely,

Drew Lehman
Director, Environment and Planning

All w/attachments

cc: A. Altevogt, P. Creedon, M. Okamoto, P. Palupa, State and Regional Water Board
B. Clarkson, G. Pryor, C. Taylor, P. Yamamoto, Recology
M. Bruner, Perkins Coie

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**RECOLOGY HAY ROAD
JEPSON PRAIRIE ORGANICS AS A DBA OF RECOLOGY HAY ROAD
RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY**

**RECOLOGY HAY ROAD'S PROPOSED TIME SCHEDULE ORDER
AND RESPONSE TO PROSECUTION TEAM'S LEGAL AND TECHNICAL ANALYSIS
OF AUGUST 13, 2014**

**SUBMITTED ON SEPTEMBER 3, 2014
FOR THE OCTOBER 9-10, 2014 PUBLIC HEARING**

TABLE OF CONTENTS

I.	Introduction	1
II.	The Requirements In Staff's Tentative CDO Pertaining To The Separation Between Waste and Groundwater Are Excessive, Unnecessary and Unwarranted	3
A.	The Current Groundwater Monitoring System Is Sufficient And The Data Demonstrate Compliance	4
B.	The Complaints of Regional Board Staff Concerning the Accuracy of the Separation Measurements Are Unfounded.....	6
C.	The Slurry Wall Does Not Have A Measurable Influence On The Data	8
D.	The Depth Of The Groundwater Monitoring Wells Is Not A Relevant Factor	9
E.	Installation of New Monitoring Wells Closer to Sumps Would Not Appreciably Affect The Accuracy Of The Groundwater Monitoring Network	10
F.	Staff's Proposed Requirement "To Immediately Lower the Groundwater" Is Not Practicable	11
G.	Recology Has Answered Staff's Recent Questions Regarding the Lowest Point of the Disposal Units	12
III.	The Regional Board Should Adopt and Issue Recology's Proposed Time Schedule Order	13
IV.	The Regional Board Should Not Make A Classification In This Enforcement Proceeding That Compost Leachate Constitutes A "Designated Waste"	16
V.	Conclusion	17

I. Introduction

Recology Hay Road (Recology or Discharger) presents this response to the tentative Cease & Desist Order proposed by Staff of the Central Valley Regional Water Quality Control Board (Regional Board), as revised on August 25, 2014, and to the Prosecution Team's Legal and Technical Analysis submitted on August 13, 2014. Recology requests that, in lieu of the tentative CDO proposed by Staff, the Regional Board adopt Recology's Proposed Time Schedule Order, which is attached as Exhibit A. With one exception, the requirements in Recology's Proposed Time Schedule Order are the same as the requirements in Staff's tentative CDO.

In requesting that the Regional Board adopt the Proposed TSO, Recology understands and appreciates the important and complex mission the Regional Board has in protecting water quality. Recology also recognizes and accepts its responsibility to work with Regional Board Staff to revise the Waste Discharge Requirements for its Hay Road site. Recology operates a large, complex, multi-faceted facility in a rapidly changing industry, under a highly regulated environment, and it acknowledges the need to update the WDRs to reflect current operations and to take other actions as agreed upon with Regional Board Staff, as outlined below.

Recology contends that a TSO reflects an appropriate and proportionate enforcement mechanism in this matter, and that a CDO is unnecessary and unwarranted. As detailed below in Section III, Recology has undertaken significant efforts – which commenced in the winter of 2014 well before Staff initiated the current enforcement proceeding now before the Board – in an attempt to work cooperatively and promptly to enumerate and resolve Regional Board Staff's concerns about the Hay Road site. On March 12, 2014, in response to Staff's concerns after a meeting at the Regional Board's offices on February 27, 2014, Recology submitted a wide-ranging workplan that addressed eleven different topics raised by Staff about the Hay Road site. The workplan proposed to voluntarily implement specific site improvements and corrective actions and to conduct additional technical studies. In its March 12, 2014 submittal, Recology also requested an opportunity to initiate a process to revise the Waste Discharge Requirements for the site (Order No. R5-2008-0188), which were adopted in December 2008 and had not been updated in over five years. In particular, Recology stated in its March 12, 2014 submittal that a "WDR revision would offer an appropriate and deliberative regulatory mechanism to specify any additional site investigations and/or corrective actions and establish a schedule for their completion."

Regional Board Staff responded on May 7, 2014, by issuing an 84-page draft Cleanup & Abatement Order. On June 5, 2014, Recology submitted an extensive package of objections to the vast array of requirements included in Staff's draft CAO. Recology claimed that the enormous breadth of the CAO was unwarranted, given that Recology already had agreed voluntarily in writing to undertake site improvements and corrective actions and it was well documented that Regional Board Staff have known for years about many of the issues raised in the draft CAO. In its June 5, 2014 submission, Recology again requested a process to revise the WDRs for the site.

In response to Recology's June 5, 2014 comments on the draft CAO, Regional Board Staff initiated the current enforcement proceeding by issuing a tentative Cease & Desist Order on July 11, 2014. Recology recognizes and appreciates that the tentative CDO addressed a narrower set

of issues than the previous draft CAO, though we understand that another CAO may well be forthcoming. Through an extensive back and forth with Regional Board Staff, Recology has been able – with one exception – to reach agreement with Staff on the substantive steps and deadlines for moving forward with the issues that are presently before the Board. This agreed-upon stepwise process, which is reflected in Staff’s August 25, 2014 version of its tentative CDO, is similar to the process and commitments that Recology had proposed in March 2014 and again in June 2014. In short, this process calls for Recology to make the site improvements it had committed to undertake; to conduct technical studies it had agreed to perform; to submit a Report of Waste Discharge to revise the WDRs for the site, as Recology previously proposed; and to address a number of operational issues at the site that Staff have known about since at least 2010. Given this context, and especially in light of the fact that Recology initially proposed in March 2014 precisely the type of WDR revision process that is now envisioned in the Staff’s tentative order, Recology maintains that a TSO is a more suitable enforcement mechanism than a CDO.

In accordance with Section 13300 of the Water Code, the Proposed TSO sets forth a detailed time schedule of specific actions that Recology proposes to take to implement site improvements, conduct additional technical studies, submit site reports, and revise and update the 2008 WDRs. The Regional Board is authorized to adopt the Proposed TSO under this provision of the Water Code and pursuant to the *Water Quality Enforcement Policy* adopted in 2010 by the State Water Resources Control Board.

As noted above, in terms of substance, the requirements in the order portion of Recology’s Proposed TSO are the same, with one exception, as the requirements in the order portion of Staff’s tentative CDO. Thus, as with Staff’s tentative order, Recology’s Proposed TSO includes provisions to ensure that, pending the process of revising the WDRs, site operations are conducted in a manner that is protective of water quality. The Proposed TSO also includes provisions to ensure that Regional Board Staff retain full and effective authority to administer and enforce the substantive requirements in the TSO, including judicial enforcement and Administrative Civil Liability. These provisions should address Staff’s concerns about how they will be able to monitor and enforce compliance with the requirements that are being imposed.

With respect to the single technical requirement that is still in dispute, as explained in Section II below, Recology contends that Staff’s proposed requirement to install a new site-wide groundwater monitoring system to assess the separation between the landfill waste and groundwater is unnecessary and unwarranted. The existing monitoring system is fully sufficient to determine compliance with the specifications in the 2008 WDRs and over a decade of monitoring data demonstrate compliance, except for a temporary occurrence at one location in the spring of 2011, which has been rectified and which no longer poses a compliance issue. There currently is no violation or threatened violation of the specifications in the 2008 WDRs governing the separation between waste and groundwater, and as a result this issue should not be included in any order that the Regional Board adopts in this proceeding.

In addition, as explained in Section IV below, Recology respectfully maintains that it is not appropriate as part of this site-specific enforcement proceeding for the Regional Board to make a classification that compost leachate constitutes “designated waste.” First, such a classification does not affect any of the substantive or procedural requirements that are under consideration in

this proceeding. Second, as the Regional Board is keenly aware, the State Water Resources Control Board currently is in the midst of an extensive statewide environmental and regulatory review of composting operations, which will address how compost liquids should be classified and managed. The State Board reportedly anticipates releasing a Draft Environmental Impact Report and a proposed General Order very soon. Accordingly, it would seem appropriate that any classification of compost leachate as “designated waste” by the Regional Board should await the State Board’s upcoming regulatory framework, or should at least be considered through a deliberative regulatory or policy-making process, rather than through an enforcement action against a single compost facility. Third, it has not been demonstrated that Regional Board Staff have followed their own policies, procedures and methodologies for making a “designated waste” classification, as reflected in the Regional Board’s longstanding guidance document entitled *The Designated Level Methodology for Waste Classification and Cleanup Level Determination* (1989), which is posted on the Regional Board’s website.

Recology has been and continues to be committed to taking prompt and effective actions to address legitimate concerns about the protection of ground and surface water quality at the Hay Road site. Recology has voluntarily proposed to address these issues by committing to undertake site improvements, corrective actions and additional studies in support of a process to revise the 2008 WDRs for the site. For all of the reasons stated herein, Recology respectfully requests that the Regional Board adopt the attached Proposed TSO at its October 2014 hearing.

II. The Requirements In Staff’s Tentative CDO Pertaining To The Separation Between Waste and Groundwater Are Excessive, Unnecessary and Unwarranted

Provisions 6 through 9 (at page 13) of Staff’s tentative CDO (Revision 2 dated Aug. 25, 2014) would require Recology to construct a new site-wide groundwater monitoring network, consisting of the installation of a piezometer or monitoring well as close as possible to each Leachate Collection and Removal System (LCRS) sump. These provisions would further require using the new monitoring points to measure the separation between the waste and the groundwater to a level of accuracy of 0.1 foot. In addition, these provisions would require a workplan “to immediately lower the groundwater” in the event that a violation of the separation requirements in the WDRs is identified.

As set forth below, these requirements lack merit from a hydrogeological and engineering standpoint, and would yield little if any new technically defensible data. As a result, the proposed requirements are excessive and unnecessary and should not be included in any order adopted by the Regional Board. The requirements should be deleted in their entirety.

Contrary to the claims of Regional Board Staff, the current monitoring system generates sufficient data to determine compliance with the specifications in the site’s WDRs for the required separation between the landfill waste and the groundwater, and the monitoring data demonstrate current compliance with these requirements. In addition, Staff’s complaints about the accuracy of the separation measurements are unfounded and misconstrue standard hydrogeologic and engineering principles and practices. Similarly, Staff’s claim that shallow groundwater flows have been altered by a slurry wall is refuted by the evidence. Staff’s claim that groundwater monitoring wells screened at deeper intervals hampers accurate measurements

is equally unsupported. Moreover, Staff's proposed requirement to install new monitoring devices as close as possible to each and every LCRS sump at the Hay Road site is a costly and burdensome measure that would not appreciably alter the level of accuracy that the existing monitoring system currently achieves. Finally, the requirement "to immediately lower the groundwater" is simply not practicable. Each of these points is discussed in detail below.

A. The Current Groundwater Monitoring System Is Sufficient And The Data Demonstrate Compliance

As reflected in Recology's semi-annual monitoring reports, the methodology that is used to determine groundwater separation at the site starts with measuring the depth to groundwater in each of the groundwater monitoring network wells to the nearest 0.01 foot. The depth to groundwater measurements are then converted to elevations, by subtracting the measured depth to groundwater from the surveyed top of well casing elevation. The collective groundwater elevation data are then modeled using a well-recognized groundwater computer software program (Surfer) to generate a contour map. The software program statistically interpolates between the elevation data points to estimate points of equal elevation (*i.e.*, equipotential lines or "contours"). In the case of groundwater elevations beneath the waste modules, the software program utilizes elevation data from wells closest to the respective waste modules to interpolate elevations between these points. The resulting contours that extend beneath the waste modules, coupled with data from the nearest monitoring well, are then compared to the LCRS sump elevations to determine groundwater separation. This methodology is consistent with standard hydrogeologic practices for analyzing groundwater elevation data.

Since it is only possible to measure groundwater elevation to a level of accuracy of 0.01 feet at the location of the groundwater monitoring well, statistical interpolations must be made to determine elevations at points located away from the well. In recognition of this limitation, the practice at the site has been to measure projected elevations at points away from the location of the groundwater monitoring well to the nearest 0.1 foot and then to round this value up or down to the nearest foot. Thus, for example, a value of 2.8 feet would be rounded up to 3 feet, while a value of 2.4 feet would be rounded down to 2 feet.

To assess compliance with the separation specifications in the WDRs, Recology and its technical consultants, Golder Associates and EBA Engineering, have evaluated the groundwater separation data for the site over the last decade. This evaluation is based on a review of the last 19 semi-annual monitoring reports for site, which encompass 38 quarters of data, from the first quarter of 2005 to the second quarter of 2014. This time frame is considered reasonable for assessment purposes as it includes both above-average and below-average rainfall years.¹ Golder produced the following table (shown on the next page), which provides a summary of the findings for all of the waste cells other than DM-1 and the Land Treatment Unit, which are addressed below. This review of the last ten years of data shows there is no evidence suggesting that encroachment of the groundwater separation requirements in the 2008 WDRs represents a realistic ongoing concern.

¹ Western Regional Climate Center, Davis I WSW Station. <http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca2294>.

Waste Cell	Sump ID	Separation Specification (Feet)	Minimum ⁽¹⁾ Separation (Feet)	Maximum Separation (Feet)	Average Separation (Feet)
DM-2.1	S-2.1	3	7	14	10.4
DM-2.2	S-2.2A	2.5	13	30	21.7
DM-2.2	S-2.2B	2.5	10	18	14.7
DM-3.1	S-3.1	2.5	6	9	7.4
DM-3.2	S-3.2	2.5	4	7	5.7
DM-3.3	S-3.3	2.5	3	8	4.4
DM-4.1	S-4.1	2.5	3	7	5.4
DM-5.1	S-5.1A	2.5	7	9	8.3
DM-5.1	S-5.1B	2.5	7	10	8.8
DM-5.2	S-5.2	2.5	4	6	4.8
DM-6.1	S-6	2.5	5	6	5.7
WP-9.1	S-9.1A	2.5	4	7	5.9
WP-9.1	S-9.1B	2.5	5	8	6.6
DM-11.1	S-11.1	2.5	7	13	9.6
DM-11.2	S-11.2	2.5	6	11	8.7

Note: (1) For these 15 sumps, in no instance was the minimum separation specification contravened.

For 10 of the 15 sump locations in the table, the minimum separation observed since 2005 is at least twice the amount of separation required in the WDRs, which means there is a significant buffer distance between the groundwater and the waste. For 3 other sump locations (S-3.2, S-5.2, and S-9.1A), the minimum separation observed over the last ten years was 4 feet, as compared to the separation requirement in the WDRs of 2.5 feet, and the average separations over that time period are 5.7, 4.8, and 5.9 feet, respectively.

Since 2005, there have only been two sump locations where groundwater has risen within one foot of the applicable separation requirement in the WDRs. These locations correspond to Sumps S-3.3 and S-4.1. For the 38 quarterly reported separations at Sump S-4.1 since 2005, the average reported separation was 5.4 feet and 37 of the quarterly separations were four feet or greater, as compared to the required separation of 2.5 feet. Only one separation (out of 38) was reported at 3 feet and that occurred in March 2006, more than eight years ago. This value was obtained by comparing the rounded value of the sump elevation (20 feet MSL) to the rounded value (17 feet MSL) of the projected groundwater elevation at the sump, which was interpolated from the groundwater level at the nearest groundwater monitoring well, G-25. Note, however, that the actual sump elevation for S-4.1 is 20.43 feet MSL; which means that the reported separation of 3 feet from March 2006 is conservative. None of the data over the last ten years for S-4.1 show a groundwater separation at or below the applicable requirement of 2.5 feet.

With respect to S-3.3, the average separation over the last ten years was 4.4 feet and the majority of the separations were four feet or above, as compared to the required separation in the WDRs of 2.5 feet. Six separations were reported at 3 feet. Using the same procedure it used to reevaluate the one separation of 3 feet at S-4.1, Golder has reevaluated these six separations at S-

3.3 by reviewing the sump elevations and contour maps. Based on this reevaluation, Golder has determined that five of the separations are projected at between 3.0 and 3.5 feet and these values accordingly were rounded down to 3 feet when reported; one separation (in March 2011) is projected at 2.6 feet and accordingly was rounded up to 3 feet. None of the data show a separation at or below the applicable requirement of 2.5 feet.

With respect to DM-1, Recology already has acknowledged that there was a groundwater separation issue in the spring of 2011. The monitoring system for the site adequately identified this problem, which has since been rectified. As Recology has explained to Regional Board Staff, the problem in 2011 resulted from limitations on pumping the borrow pit on a regular basis due to issues related to meeting the Regional Board's discharge specifications for total suspended solids under the site's former Low Threat Discharge Permit. Recology fixed the problem by obtaining a new Limited Threat Discharge Permit (dated May 9, 2011), which allowed pumping of the borrow pit to resume and continue ever since, thereby allowing a return to compliance with the separation requirement in the WDRs. The required separation has been achieved at DM-1 since this transition, as it previously had been achieved before this temporary incident. This shows that the engineering controls associated with pumping of the borrow pit can effectively address the issue without the need for new groundwater monitoring wells. The current circumstances are completely different than those in 2011 and do not support the claims by Staff that there continues to be a violation or threatened violation of the 2008 WDRs, or that the existing groundwater monitoring system is inadequate to demonstrate compliance.

With regard to monitoring of the Land Treatment Unit (LTU), Recology has included this in its 2014 reporting and has committed to include this item in its future reporting. As reflected in the July 2014 semi-annual monitoring report, the two separation projections completed by Golder for 2014 (February and May) showed separations of 6 feet, which meets the applicable separation requirement of 5 feet.

These conditions show that it is not necessary or appropriate to install a new site-wide groundwater monitoring system, as proposed by Provisions Nos. 6 through 9 of Staff's tentative CDO. Further, as explained below, this extensive new monitoring system would have little, if any, influence on the accuracy of the groundwater separation measurements.

B. The Complaints of Regional Board Staff Concerning the Accuracy of the Separation Measurements Are Unfounded

The Prosecution Team's Legal and Technical Analysis states: "Contrary to the MRP [Monitoring & Reporting Program] and the Discharger's Construction Quality Assurance (CQA) Plan, the Discharger does not report groundwater elevations to the nearest hundredth of a foot but rather rounds the data to the nearest foot. Considering all groundwater elevations are reported to the nearest 100th foot, there is no need to reduce the significant figures reported."

This assertion suffers from multiple flaws. First, as explained above, groundwater elevations are measured to 0.01 feet (i.e., 3 millimeters) within each groundwater monitoring well, consistent with the 2008 WDRs. This groundwater elevation information has been routinely presented in each semi-annual monitoring report in the form of tables and/or groundwater elevation contour

maps. Since groundwater monitoring wells cannot be put through a base liner and are not required to be placed within a body of waste, standard hydrogeologic interpolations must be used to measure the separation between the waste and groundwater. This process is described in Section A above.

Second, the current 2008 MRP does not require reporting separations between waste and groundwater to the nearest 100th or 10th of a foot. Rather, the MRP states merely that Recology “shall determine the separation of groundwater from the lowest point of each unit and/or module.” Monitoring & Reporting Program No. R5-2008-0188 at p. 8. As shown above, the data and methodology used are sufficient to demonstrate compliance with this requirement and the data show that compliance currently is being achieved.

In addition, the “CQA Plan” referenced by Regional Board Staff applies to the construction and repair of waste cells and is unrelated to ongoing groundwater monitoring.

Further, while Tables I-A and I-B of the 2008 MRP indicate that groundwater elevations shall be measured to an accuracy of 0.01 foot, these tables are intended to outline the monitoring and testing requirements for the landfill’s *groundwater monitoring wells*. All references to these tables in the MRP are in the context of how the groundwater monitoring wells shall be monitored and sampled. In contrast, the requirement for determining groundwater separation, as referenced in Section D(1) at page 8 of the 2008 MRP, makes no reference to Table I-A or I-B. Thus, the assertion that a level of accuracy of 0.01 feet applies to groundwater elevations interpolated between monitoring points to determine compliance with the separation requirements misconstrues the intent of the tables.

Moreover, the statement by Regional Board Staff that there is no need to reduce the significant figures reported based on the data collected from the groundwater monitoring wells does not reflect sound hydrogeologic or engineering practice. Whereas measuring to an accuracy of 0.01 foot is attainable within the confines of a groundwater monitoring well where the groundwater surface can be measured directly, maintaining that same level of accuracy is not possible when interpolating groundwater elevations between monitoring points. Since the LCRS sumps are, by design, situated beneath waste at distances of 50 feet or greater from the edge of waste, presenting groundwater elevation data at points beneath the LCRS sumps at the level of accuracy proposed by Staff would imply a higher level of accuracy than is practical. Neither of Recology’s professional engineering consultants believe that it is professionally defensible to extrapolate groundwater well data out for any appreciable distance at this site to a precise level of accuracy of 0.01 or 0.1 foot.

Finally, as explained in Section E below, there are significant physical and engineering constraints on how close a groundwater monitoring well can be installed to an LCRS sump. As a result, installing a new groundwater monitoring system would not measurably affect the existing level of accuracy. Given that the groundwater monitoring data already are sufficient to show compliance with the separation specifications in the WDRs, there is no sound basis for adopting Staff’s proposed requirements for a new site-wide monitoring system.

C. The Slurry Wall Does Not Have A Measurable Influence On The Data

Finding No. 20 of the current version of the tentative CDO (Revision 2 dated Aug. 25, 2014) suggests that the slurry wall may affect the ability to accurately determine groundwater separation, based on the locations of some of the LCRS sumps and compliance wells on opposite sides of the wall. The Prosecution Team's Legal and Technical analysis similarly states that the slurry wall "was installed as a barrier, which at a minimum will impede the natural flow of the shallow groundwater."

But these assertions are refuted by a previous hydrogeological analysis for the site, which explains that the slurry wall has had minimal effect on groundwater and is not a factor in data analysis²:

Slurry walls can provide an effective way to impede the flow of groundwater. However, slurry walls are not intended to be impermeable barriers; leakage occurs through all slurry walls, and groundwater underflow can be significant if the slurry wall is not keyed into an aquitard.

...a thorough review of regional and site geologic data indicates that the sediments beneath the site are a fairly homogeneous mixture of sandy silt and sandy clay, with localized zones of fine-grained sand. There does not appear to be a deeper zone of markedly lower permeability. Thus, there is not a lower "aquitard" that the perimeter slurry wall was keyed into.

The intent of the slurry wall design was to minimize the rate at which it would be necessary to remove groundwater to maintain an inward hydraulic gradient. Actual field performance data, however, indicate that the wall has not been as effective as was intended. The groundwater extraction rates from the interior groundwater drain have been higher than initially intended to maintain the inward gradient. Also, the hydraulic effects of groundwater extraction from Module 1 are observed outside of the perimeter slurry wall. Groundwater elevations measured in monitoring wells located several hundred feet outside of the perimeter slurry wall are lower than regional groundwater elevations (e.g., Well MW92-2)... These observations indicate that groundwater may be moving through or under the perimeter slurry wall.

In addition to this historical evaluation, review of recent groundwater contour maps, as included in the 2005-2014 monitoring reports, clearly display the cone of influence induced by the borrow pit pumping and how it propagates unhindered across the slurry wall boundaries. If the slurry wall was impeding the natural flow of groundwater as suggested by Regional Board Staff, then the drawdown effects associated with the borrow pit pumping would not be as readily discernable inside the slurry wall boundaries. Furthermore, based on the distance of the eastern modules from the slurry wall, it is highly unlikely that the slurry wall's presence, regardless of its effectiveness, would have an appreciable effect on groundwater elevations in the eastern module area.

² Einarson Geoscience. Geology and Hydrogeology, B&J Drop Box Sanitary Landfill, Solano County. (Feb. 1995).

D. The Depth Of The Groundwater Monitoring Wells Is Not A Relevant Factor

Regional Board Staff contend that groundwater monitoring wells that are screened at intervals that do not intersect the static groundwater table surface do not allow for accurate groundwater measurements. This contention is incorrect.

First, the design and installation of the existing groundwater well network at the site have been previously reviewed and approved by Regional Board staff.

Further, as reflected in the 1995 geology and hydrogeology report cited above (*see* footnote two), previous investigations and monitoring at the site have demonstrated that the underlying aquifer behaves as a single water body. In essence, the water-bearing zones are in hydraulic communication with each other, thereby resulting in similar potentiometric head conditions for monitoring wells located in close proximity. As a result, the completion depth and screen interval for monitoring wells does not have an appreciable effect on static groundwater elevation. A table demonstrating these conditions for adjacent shallow and deep monitoring wells at the site is presented below. As described in the 1995 Geology and Hydrogeology report, well pairs are monitoring wells or piezometers installed next to one another, but which screen different intervals. Comparison of the elevations of groundwater measured in the well pairs provides information about the vertical hydraulic gradient in the vicinity of the well pair. The bottom elevation of each well in the table was determined from Table 2, Summary of Monitoring Well Construction, in the 1995 geology and hydrogeology report cited above and from well boring logs that have been uploaded to the GeoTracker system. There are shallow-screened monitoring wells that are located adjacent to each of the deep-screened wells as shown on the site groundwater contour maps included the monitoring reports for the site (2005-2014). As presented in the column entitled “GW Elev. Difference,” the data show minimal difference in groundwater elevation (0.09 to 0.23 feet), even though the monitoring wells are screened at different depths.

Shallow Wells			Deep Wells			Summary	
Well	Bottom Elev. of Well (feet MSL)	Groundwater Elev. (feet MSL)	Well	Bottom Elev. of Well (feet MSL)	Groundwater Elev. (feet MSL)	GW Elev. Difference (feet)	Well Elev. Difference (feet)
G-8	4	15.56	D-1	-43	15.71	0.15	47
P-1	0	16.43	D-2	-42	16.29	0.14	42
MW-4	-11	8.62	D-4	-45	8.85	0.23	34
MW-7	-20	12.19	D-6	-46	12.28	0.09	26
MW-5	-21	12.49	D-5	-46	12.59	0.10	25

The bottom elevations were determined based on a review of Einarson’s 1995 geology and hydrogeology report and data posted on the GeoTracker system. The groundwater elevations were measured on Oct. 29, 2013, as reflected in the Annual 2013 Monitoring Report (Jan. 2014).

Note that in most cases, the monitor well screened deeper has a higher groundwater elevation, indicating a slight upward gradient. These data indicate that a monitoring well screened shallower would have a slightly lower groundwater elevation. Based on this upward trending gradient, use of the deeper screened monitoring wells actually represents a conservative engineering approach relative to measuring the groundwater separation as it indicates a slightly higher groundwater elevation than would otherwise be determined from the new site-wide monitoring system proposed by Regional Board Staff. Thus, the need to replace the existing monitoring wells on the basis of their construction depth is not supported by the data.

E. Installation of New Monitoring Wells Closer to Sumps Would Not Appreciably Affect The Accuracy Of The Groundwater Monitoring Network

Regional Board Staff's tentative CDO would require the installation of monitoring devices as close to each LCRS sump as possible and would further require that the devices be designed to determine compliance with separation requirements in the WDRs. Provision No. 7 of the tentative CDO further specifies that the monitoring devices be constructed such that the screen interval extend from the bottom of the LCRS sump to at least 5 feet below the bottom of the sump. Recology has multiple concerns and points of contention with respect to these proposed requirements:

- As outlined in the previous section, it has been demonstrated that the underlying aquifer behaves as a single water body and that the corresponding completion and screen interval depths will not have an appreciable effect on static groundwater elevations. Thus, the proposed requirements will not serve to improve the accuracy of the groundwater elevation data.
- As shown in the monitoring reports for the site (2005-2014), the hydraulic gradient conditions beneath waste cells DM-2.1, DM-11.1, DM-11.2 and all of the eastern waste cells are typically on the order of less than 0.01 foot per foot (ft/ft). Under these minimal gradient conditions, the placement of new monitoring wells closer to the LCRS sumps will not result in any appreciable increase in accuracy.
- As further shown in the monitoring reports for the site (2005-2014), whereas the hydraulic gradient conditions are greater in the area of the remaining western waste cells (DM-1 and DM-2.2), the existing monitoring wells in this area are already located in close proximity to the LCRS sumps. It is estimated that any new monitoring well installations would range from only 25 to 60 feet closer to the sumps than the current monitoring wells. This small change in distance that would be achieved through Staff's proposed requirements would not improve the accuracy of the groundwater separation measurements to any appreciable degree, and use of the current methodology still would be required to interpolate the groundwater elevation data. As a result, the level of accuracy demanded by Regional Board Staff, which would require precise separation measures to 0.1 feet, still would not be attained.
- In the case of DM-1, this waste cell is equipped with monitoring wells located on each side (six wells total) of the unit and all within 100 feet of the waste footprint boundary.

There are several additional monitoring wells located within 200 to 300 feet of the waste cell that also serve to further monitor the groundwater elevation conditions in the area of DM-1. As a result, this waste cell already has a robust monitoring system in place.

In sum, the site-wide installation of a new groundwater monitoring well network would not appreciably affect the level of accuracy of the existing system. Given that the existing system already is adequate to show that compliance currently is being achieved, Staff's proposal to impose significant new monitoring requirements is unnecessary and unwarranted.

F. Staff's Proposed Requirement "To Immediately Lower the Groundwater" Is Not Practicable

Regional Board Staff's tentative CDO would require Recology to propose a method "to immediately lower the groundwater" in the event that a seasonal violation of the separation requirements in the WDRs is identified. For the following reasons, such a requirement is not practicable:

- Pumping from individual wells will not induce the amount of drawdown that would be necessary to lower groundwater at an appreciable distance from the well, let alone beneath the entire waste cell. As demonstrated by the groundwater remediation efforts performed at the site using extraction well G-22 (and as reflected in the monitoring reports for the site), the average yield from this well has been approximately 1.5 to 2 gallons per minute. Thus, the only practical means of inducing large scale drawdown in a low-permeability environment is prolonged pumping from a large "sump," such as the borrow pit.
- The current stable groundwater separation achieved by the borrow pit dewatering took over 10 years to attain and maintain due to the hydrogeologic conditions at the site. The low-permeability of the underlying aquifer significantly inhibits groundwater yields and therefore requires long sustained pumping over an extended period of time to induce appreciable drawdown over a large area, such as the DM-1 waste cell that is tens of acres in size.
- Even if a suitable pumping system could be designed and installed, the time it would take to lower the groundwater in the area would likely exceed the duration of the seasonal fluctuation.³

Furthermore, the separation data above demonstrate that the specifications in the WDRs currently are being consistently achieved. As a result, not only is the requirement to develop a workplan to immediately lower the groundwater impracticable, there has been no showing that such a workplan is needed to address the actual site conditions. Any claim that a plan to immediately lower the groundwater is needed to protect against some possible future violation of the separation requirements is speculative and unsupported by the groundwater monitoring data.

³ Einarson, Fowler & Watson, Proposed Method to Achieve Five Feet of Separation Between Waste and Groundwater and Groundwater for Disposal Module 1, B&J Drop Box Sanitary Landfill (July 17, 1996).

In sum, the imposition of extensive new groundwater monitoring requirements through Staff's proposed enforcement order is inappropriate and unsupported.

G. Recology Has Answered Staff's Recent Questions Regarding the Lowest Point of the Disposal Units

On August 28, 2014, Regional Board Staff posed three questions via email regarding the elevation used to determine the lowest point of each waste management unit. Recology and its technical consultants provided a response on that same day. The questions and responses are reproduced below:

Question 1: Explain why the separation between waste and groundwater has not been reported for DM-4.2, -4.3, -6.1., and -6.2.

Answer: DM-4.1, DM-4.2, and DM-4.3 are one contiguous disposal module that was built in three phases. DM-4.1, DM-4.2, and DM-4.3 all drain to one leachate sump named S-4.1. Therefore, we report the separation between S-4.1 (the lowest point in the disposal module) and groundwater.

DM-6.1 and DM-6.2 are one contiguous disposal module that was built in 2 phases. DM-6.1 and DM-6.2 both drain to one leachate sump named S-6. Therefore, we report the separation between S-6 (the lowest point in the disposal module) and groundwater.

Question 2: Why were the "sump elevations" in Table 3 changed for DM-2.1, -3.1, -5.1A, and -5.1?

Answer: The sump elevations were changed as more detailed elevation data became available. Please note that these elevations are lower (i.e. sumps are deeper which makes the separation calculation more conservative) than the previous data. Review of the data with the revised, more conservative evaluations shows that the modules were still in compliance with the separation requirements of the 2008 WDRs (Order No. R5-2008-0188), Construction Specification D2.

Question 3: Why is the lowest surveyed point of a disposal module not used to calculate the separation?

Answer: The lowest point in the disposal module is the base of the leachate sump, not the pan lysimeter, as has been claimed by Regional Board Staff. Please note the pan lysimeter is an element of the monitoring system and not part of the disposal units. Finding #70 of the 2008 WDRs states: "The EAD/S [engineered alternative design for separation] allowed for a minimum separation of two and one half feet from the **bottom of the LCRS (including LCRS sump) to the groundwater table.**" (Emphasis added.) Therefore, consistent with Finding No. 70 of the 2008 WDRs, Recology reports the separation between the base of the LCRS sump and groundwater.

III. The Regional Board Should Adopt and Issue Recology's Proposed Time Schedule Order

Section 13300 of the California Water Code states:

Whenever a regional board finds that a discharge of waste is taking place or threatening to take place that violates or will violate requirements prescribed by the regional board, or the state board, . . . , the board may require the discharger to submit for approval of the board, with such modifications as it may deem necessary, a detailed time schedule of specific actions the discharger shall take in order to correct or prevent a violation of requirements.

The *Water Quality Enforcement Policy* adopted by the State Water Resources Control Board in 2010 explains that under this provision of the Water Code, a Regional Board may issue a Time Schedule Order that memorializes a time schedule submitted by the discharger "that sets forth the actions the discharger will take to address actual or threatened discharges of waste in violation of requirements." State Water Resources Control Board, *Water Quality Enforcement Policy* (dated May 20, 2010), at p. 35. Recology contends that its Proposed TSO represents an appropriate and effective enforcement mechanism in this proceeding.

On March 12, 2014, in response to concerns expressed by Regional Board Staff about the Hay Road site and after a meeting on the matter held on February 27, 2014 at the Regional Board's offices, Recology and its engineer, Golder Associates, submitted a technical report and workplan addressing eleven different topics relating to groundwater and surface water quality at the site: (1) pan lysimeters; (2) nitrates in groundwater; (3) potential for green waste and food composting contributions to nitrates; (4) site drainage controls; (5) landfill benching requirements; (6) stability of constructed landfill slopes; (7) site perimeter berms; (8) the compost area ponds; (9) the stormwater holding pond located south of the compost area; (10) collection and control of runoff from the western side of the compost facility; and (11) the composting processing method.

The workplan proposed to undertake a series of site modifications, corrective actions, and technical studies. For example, the workplan proposed to implement an in-situ bioremediation plan, as well as additional sampling and monitoring, to address nitrate-impacted groundwater. The workplan also proposed to re-route runoff from the western compost area away from the unlined "green waste" pond to a lined conveyance and storage system, and to complete the associated site improvements before the onset of the 2014-2015 rainy season. The workplan further proposed to conduct a drainage study to evaluate compliance with the applicable specifications in the WDRs and to provide recommendations for site modifications based on the study if needed. In addition, the workplan proposed to evaluate the slope stability for one of the temporary stockpiles (DM-11) and to conduct additional slope stability analyses if warranted. The workplan and accompanying correspondence also indicated that Recology intended to work cooperatively with Regional Board Staff to revise the WDRs for the site and to establish a schedule for any additional site investigations or corrective actions. Recology anticipated that the workplan would trigger a collaborative dialogue with Staff about what the specific next steps should be in terms of implementing site modifications and conducting technical studies as well as the process and timeline for updating and revising the WDRs for the site.

But in response to this proactive and cooperative effort by Recology, on May 7, 2014, Regional Board Staff issued an 84-page draft Cleanup & Abatement Order, which would have imposed a detailed set of 36 requirements through the Order's provisions, which spanned 10 pages of single-spaced text. The requirements in the draft CAO would have cost millions of dollars to satisfy, but there was no effort by Staff to demonstrate that the requirements were necessary, cost-effective or scaled to the potential for environmental harm.

As explained above, Recology understands the Regional Board's important mission in protecting water quality, it recognizes the need for certain corrective actions and additional technical studies, and it has proposed to initiate a process to revise the WDRs for the Hay Road site. This is why Recology presented its March 2014 workplan in an attempt to enumerate and address the concerns of Regional Board Staff. But as reflected in its June 5, 2014 response to the draft CAO, Recology was compelled to produce a substantial package of legal and technical objections to the enormous scale of the requirements that Staff had sought to impose through its draft CAO -- especially since the CAO included many issues, which Staff claimed were violations of the 2008 WDRs, that Staff clearly have known about and acquiesced to for years.

The current enforcement proceeding ensued through Staff's issuance of a tentative Cease & Desist Order on July 11, 2014. This proceeding involves a more confined set of issues than the previous draft CAO and, with one exception (*see* Section II above), Recology has been able to work cooperatively to reach agreement with Regional Board Staff on the substantive requirements and procedural deadlines that are now before the Board. Indeed, except for the one proposed requirement still in dispute, the approach reflected in Staff's latest version of the tentative CDO (Revision 2 dated August 25, 2014) is similar to the compliance approach that Recology previously proposed in March 2014:

- For example, the first requirement in the tentative CDO is that Recology must submit, by November 1, 2014, a *Compost Area Stormwater Modification* technical report documenting site modifications to ensure that compost water is discharged only to lined ditches and ponds and does not flow into the unlined "green waste" pond. In its March 2014 workplan, Recology already had committed to implement these site improvements and to complete construction by September 30, 2014.
- Another requirement in the tentative CDO is that Recology must submit, by February 1, 2015, a Report of Waste Discharge to revise the WDRs for the site to reflect the fact that the current configuration of the low-flow and high-flow compost ponds does not match the description in Finding 88 of the 2008 WDRs. In addition to the fact that Recology has suggested a revised WDR process to address this and other issues at the site, Regional Board Staff have known for years that water from the low-flow pond flows into the high-pond.⁴ Also, there is no evidence of any discharge to surface waters from the low-

⁴ *See, e.g.*, (1) Letter from Mary Boyd to Greg Pryor (Apr. 22, 2010) (recognizing that the high-flow pond holds both "compost leachate and stormwater runoff"); and (2) Golder Associates, Report of Remedial Actions, Compost High-Flow and Low-Flow Ponds (Jan. 26, 2011) (transmitted to Regional Board Staff via letter from Bryan Clarkson to Mary Boyd dated Feb. 14, 2011) ("The larger pond serves as the primary storage impoundment for surface water runoff from the composting area. The smaller Low-Flow Pond collects surface water run-off during periods with relatively low discharge to allow more efficient aeration of the stormwater. Water from the Low-Flow

flow/high-flow pond system since it was constructed in 2006; no discharge has occurred from the system, which has been designed to accommodate the average annual rainfall plus a 100-year, 24-hour storm event.

- Another requirement in the tentative CDO is that Recology must submit, by February 1, 2015, a Report of Waste Discharge to revise the WDRs to allow for the use of compost leachate as dust control. As with the pond system, Regional Board Staff have known for years about this practice.⁵ Further, while Finding 17 of the tentative CDO asserts that use of compost leachate for dust control “is a violation of Discharge Specification B.13” in the 2008 WDRs, the Prosecution Team’s Legal and Technical Analysis contradicts this assertion, acknowledging that “the application of leachate from composting operations to the lined portions of the landfill is not specifically restricted by Discharge Specification B.13, which speaks to reapplication of leachate from a *lined landfill*” (Emphasis added.)
- Another requirement in the tentative CDO is that Recology must submit, by February 1, 2015, a Report of Waste Discharge to revise the WDRs to reflect the fact that the in-vessel composting method is no longer used. This change in composting process is another issue that Recology had suggested addressing through revised WDRs. Further, according to Regional Board Staff, they observed the change in composting methods more than four years ago, during an April 7, 2010 site visit.⁶
- Another set of provisions in the tentative CDO would require Recology to conduct technical studies by March 2015 related to runoff and drainage controls and fill slope stability. Again, Recology already proposed to undertake drainage and slope design evaluations in its March 14, 2014 workplan.

Recology and Regional Board Staff do not dispute the substance of these requirements or the procedural deadlines to be attained. But given that Recology previously proposed to undertake specific site improvements and to conduct additional technical evaluations in support of a WDR revision process – and given that Regional Board Staff have long known about how the compost ponds are operated, how compost leachate is used for dust control, and how site operations are conducted – Recology respectfully contends that a TSO is a more appropriate mechanism than a CDO to memorialize the substantive steps and procedural deadlines going forward.

Since the requirements in Recology’s Proposed TSO are the same as the requirements in Staff’s tentative CDO (with the exception of the groundwater-waste separation issue, which should be

Pond is then pumped to the larger High-Flow Pond. During higher precipitation events, surface water is pumped directly to the High-Flow Pond.”).

⁵ See, e.g., (1) Golder & Associates, Liner Repair Plan for the Compost Area Storm Water Pond (Sept. 16, 2010), at p. 1 (transmitted to Regional Board Staff via letter from Greg Pryor to Mary Boyd, dated Sept. 20, 2010); and (2) Golder & Associates, Report of Remedial Actions, Compost High-Flow and Low-Flow Ponds (Jan. 26, 2011) at p. 2 (transmitted to Regional Board Staff via letter from Greg Pryor to Mary Boyd, dated Feb. 14, 2011).

⁶ Recology maintains that it has used in-vessel composting systems (Ag-Bag, Compostex, and ECS) at the Hay Road site up to August 2013, when a changeover to the current “aerated static pile” system was initiated. The current system uses an air distribution system to blow or otherwise draw air through the pile and uses organic material and process overs as an organic biofilter cover on the windrows.

eliminated from consideration as discussed in Section II above), there should be no concern over whether the Proposed TSO includes sufficient protections for water quality pending revisions of the WDRs. The Proposed TSO also includes the following provision to ensure that Regional Board Staff retain complete authority to monitor and enforce compliance with the applicable requirements:

The Discharger agrees through this Order, which it has proposed and submitted for the approval and adoption by the Central Valley Regional Water Quality Control Board, that the requirements set forth in the Order may be enforced under Section 13350 of the Water Code in the same manner as if this Order constituted a Cease & Desist Order. The Discharger hereby waives any future objection, to the extent that such objection is premised on the ground that this Order is entitled a Time Schedule Order, to such future enforcement.

This provision should address any concerns raised by Regional Board Staff concerning future enforcement of the Proposed TSO, including through judicial enforcement or Administrative Civil Liability.

For the reasons stated above, Recology requests that the Regional Board adopt the Proposed TSO in lieu of Staff's tentative CDO.

IV. The Regional Board Should Not Make A Classification In This Enforcement Proceeding That Compost Leachate Constitutes A "Designated Waste"

Regional Board Staff propose that the Board make a formal classification that compost leachate from Recology's operations at the Hay Road site constitutes a "designated waste." For several reasons, the Board should decline to make such a classification.

First, such a classification is wholly unnecessary. It is not needed to adopt any of the requirements that have been proposed for consideration by the Board in this proceeding, either as part of Recology's Proposed TSO or Staff's tentative CDO. In other words, such a classification makes no difference in the outcome of this proceeding.

Regional Board Staff posit, based on the claim that compost leachate should be classified as "designated waste," that "it is not appropriate to allow this waste to overflow and discharge to surface waters." See Tentative CDO (Revision 2, dated Aug. 25, 2014) at page 4, under heading "Designated Waste." But Recology agrees that compost leachate should not be allowed to overflow and discharge to surface waters. Thus, Recology's proposed TSO contains the same substantive requirements on this issue as does Staff's tentative CDO. Indeed, Recology has emphasized that there has been no surface discharge since the pond system was constructed in 2006 and the overflow pipe connected to the high-flow pond is only for an emergency. In sum, there is no underlying reason for making the classification as part of this proceeding.

Second, the State Water Resources Control Board currently is engaged in a detailed, statewide review process for composting operations, which will include a proposed General Order and a draft Environmental Impact Report under the California Environmental Quality Act. In all likelihood, the State Board's environmental review and regulatory process will include a

thorough and detailed consideration of whether and under what conditions compost leachate would be classified as a “designated waste.” Indeed, the State Board considered this important issue in its previous proceedings on the prior version of the draft General Order for composting operations.

If the Central Valley Regional Board is going to consider making a formal classification that compost leachate is a “designated waste” before the State Board completes its statewide environmental review, the Regional Board should consider this issue through a deliberative regulatory or policy-making process, not in an enforcement proceeding against a single discharger. This is especially true here, since the presence or absence of such a classification does not affect any of the requirements that are at issue in this proceeding.

Third, there has been no showing that Staff’s asserted classification complies with applicable Regional Board guidance on the appropriate procedures and policies for making a “designated waste” classification. See Central Valley Regional Board Staff Report, *The Designated Level Methodology for Waste Classification and Cleanup Level Determination* (Oct. 1986, updated June 1989), which is posted on the Regional Board’s website as a “General Guidance” document (http://www.swrcb.ca.gov/centralvalley/plans_policies/guidance/index.shtml). Under that guidance, contrary to the position of Regional Board Staff in this matter, a waste stream is not automatically classified as “designated waste” merely because it exceeds a water quality goal or benchmark.

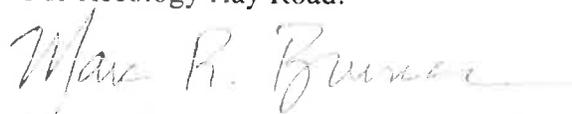
For all of these reasons, the Regional Board members should not make a formal classification that compost leachate constitutes a “designated waste.”

V. Conclusion

For the reasons stated above, Recology respectfully requests that the Central Valley Regional Water Quality Control Board adopt Recology’s Proposed Time Schedule Order in lieu of the tentative Cease & Desist Order proposed by Regional Board Staff. The Proposed TSO is attached as Exhibit A.

Recology’s Proposed TSO reflects the voluntary commitments Recology made to address Staff’s concerns about the Hay Road site and Recology’s proposal to initiate a process to revise the 2008 Waste Discharge Requirements for the site, before Staff initiated the current enforcement proceeding. Recology’s Proposed TSO implements all of the same requirements that are proposed in Staff’s tentative CDO, with the exception of Staff’s proposed requirement to install a new site-wide groundwater monitoring network to measure separation between the groundwater and the landfill waste. As shown above, this proposed requirement is unnecessary and unwarranted. The existing groundwater monitoring network is fully sufficient to demonstrate compliance with the separation requirements in the WDRs and the monitoring data demonstrate that the site currently complies with these requirements. Recology’s Proposed TSO also avoids the unnecessary issue of classifying compost leachate as “designated waste,” an issue that does not affect any of the requirements under consideration by the Board and that will be addressed in short order by the State Water Resources Control Board’s comprehensive environmental and regulatory review of composting operations statewide.

For Recology Hay Road:

A handwritten signature in cursive script that reads "Marc R. Bruner". The signature is written in dark ink and is positioned above the printed name.

Marc R. Bruner
Perkins Coie LLP

September 3, 2014

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2014-XXXX

~~CEASE AND DESIST ORDER, REVISION 2, DATED 8/25/14~~
~~TIME SCHEDULE ORDER (PROPOSED BY RECOLOGY 9/3/14)~~
[Changes from Regional Board Staff's Tentative CDO (Revision 2, dated 8/25/14)
are shown in redline/strikeout format]

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

~~REQUIRING COMPLIANCE WITH TO CEASE AND DESIST~~
~~FROM DISCHARGING CONTRARY TO WASTE DISCHARGE~~ REQUIREMENTS

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

1. Recology Hay Road (hereafter referred to as Discharger) owns and operates an active landfill and composting operation regulated by the Water Board under the name of "Recology Hay Road" (facility). According to the WDRs, the facility consists of two Class III landfills (LF-1 and LF-2), one Class II landfill (LF-3), a Class II sewage sludge waste pile (WP-9.1), a Class II sewage sludge land treatment unit (LTU), green-waste and food-waste composting areas, and two lined compost leachate ponds, as shown on Attachment A. The Discharger performs active composting on a 22-acre all-weather pad and stores finished compost product on a 32-acre area, all within the landfill footprint.
2. The Hay Road Landfill is located on a 640-acre site, of which 256 acres are permitted for landfill disposal and composting operations.. The site also includes a borrow pit and a habitat preserve. The Landfill is located about eight miles east of Vacaville on Hay Road in Solano County on Assessor's Parcel Numbers 42-020-02, 42-020-06, and 42-020-28.
3. Waste Discharge Requirements (WDRs) Order R5-2008-0188 was adopted by the Central Valley Water Board on 5 December 2008, and regulates the operation, closure, and post-closure maintenance of the facility. The facility operations must comply with Title 27 of the California Code of Regulations.
4. The facility is also regulated under the State Water Resources Control Board's Water Quality Order No. 97-03-DWQ, the *Statewide Industrial Storm Water General Permit* (General Permit) and under the Central Valley Water Board's NPDES Limited Threat General Order R5-2013-0073 for dewatering of a borrow pit. As described in Finding No. 65 of the WDRs, "...De-watering of units to meet prescriptive separation and to maintain operability of the borrow pit is accomplished by extracting groundwater from the borrow pit during the dry season..."

COMPOSTING OPERATIONS AND COMPOST LEACHATE

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

Food Waste Composting Violations

6. Discharge Specification B.27 of the WDRs states that "*Feedstock for windrow composting shall be limited to green waste and agricultural waste as defined in Title 14. Food waste feedstock shall be limited to in-vessel composting as defined in Title 14, and may be combined with green waste for in-vessel composting.*" Title 14, California Code of Regulations, section 17852 subdivision (a)(41) defines "within vessel composting" as "... a process in which compostable material is enclosed in a drum, silo, bin, tunnel, reactor or other container for purposes of producing compost . . .".
7. Finding 88 of the WDRs states "*Leachate from the in-vessel composting is collected and returned to within the system.*" Title 27 Section 20164 defines leachate as "*any liquid formed by the drainage of liquids from waste or by the percolation or flow of liquid through waste. It includes any constituents extracted from the waste and dissolved or suspended in the fluid.*"
8. **The Regional Board staff contend that the** Discharger ceased using in-vessel composting prior to April 2010¹, in violation of the WDRs. Presently, food waste composting is performed in the active composting area using windrows which are open to the elements². The current system does not satisfy the within-vessel containment requirements of Title 14 or the WDRs nor does it keep leachate within the vessel system, as required by the WDRs. This Order provides the Discharger a time schedule to either return to in-vessel composting as required by the WDRs or to submit a Report of Waste Discharge (RWD) showing that non in-vessel composting is protective of water quality. If the Water Board

¹ 7 April 2010 Water Board staff inspection.

² **The Discharger maintains that in-vessel composting systems (Ag-Bag, Compostex, and ECS) were used continuously at the Hay Road site up to August 2013, when a changeover to the current "aerated static pile" system was initiated.** The Discharger states that the current "aerated static pile" system uses an air distribution system to blow or otherwise draw air through the pile **and uses organic material and process overs as an organic biofilter cover on windrows.** The Discharger also maintains that the change from an in-vessel system to the **organic material covered** aerated static pile allows for odors to be suppressed and more controlled moisture conditioning of the feedstock. In addition, the Discharger states that less compost leachate is generated with the current system because water is evaporated. However, Board staff maintain that the in-vessel system described in the WDRs allows for more precise management of leachate, especially during the wet season.

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

adopts new WDRs that authorize non in-vessel composting prior to the time schedule in this Order, then the Discharger will not need to return to in-vessel composting.

Leachate Ponds Violations

9. WDRs Prohibition A.19 states "*The discharge of solid or liquid waste or leachate to surface waters, surface water drainage courses, or groundwater is prohibited.*"
10. Finding 88 of the WDRs states that leachate from the 22-acre active composting area flows to the 60-mil HDPE lined "low-flow" pond where it is stored and then recirculated on the compost. The Finding also states that during "significant precipitation events" runoff from the active composting area flows to "a lined high-flow pond so that it does not mix with leachate in the low-flow pond... The high-flow pond has the capacity for the average annual rainfall (20 inches) plus a 100-year, 24-hour storm (4.82 inches). Any pond overflow flows through bioswales and a sedimentation basin prior to off-site discharge under the general industrial storm water permit."
11. The process water applied to the active food waste stockpiles, as well as the rain falling onto the stockpiles, forms a leachate which is high in nitrate, total dissolved solids (TDS), and biological oxygen demand (BOD). The leachate drains out of the eastern stockpiles and flows east across the all-weather surface to a concrete-lined ditch, sump with pump, and into the low-flow pond. Contrary to the WDRs, wastewater in the low-flow pond is pumped into the high-flow pond. The high-flow pond contains a pipe through the berm, so that if the pond becomes full, wastewater may flow through the pipe and into the bioswales, sedimentation basin, and then to surface waters. The Discharger states that there have been no discharges from the ponds to surface water, but the WDRs do not require freeboard measurements or other documentation to confirm that discharges to surface waters have not occurred. In addition, the Discharger has changed the configuration of the ponds from that described in the WDRs, although Regional Board staff have known about the current configuration of the ponds since 2010.³ Therefore, there is the potential for a discharge or threatened discharge of leachate to surface waters, in violation of Prohibition A.19 of the WDRs. This Order allows the Discharger a time schedule to re-configure the ponds to comply with the WDRs or to submit a RWD requesting that the WDRs be revised to allow the current pond configuration.
12. If, during the period before the ponds were re-configured to comply with the WDRs, or the WDRs were revised, wastewater were to flow from the high flow pond into surface waters,

³ See, e.g., (1) Letter from Mary Boyd to Greg Pryor (Apr. 22, 2010) (recognizing that the high-flow pond holds both "compost leachate and stormwater runoff"); and (2) Golder Associates, Report of Remedial Actions, Compost High-Flow and Low-Flow Ponds (Jan. 26, 2011) (transmitted to Regional Board staff via letter from Bryan Clarkson to Mary Boyd dated Feb. 14, 2011) ("The larger pond serves as the primary storage impoundment for surface water runoff from the composting area. The smaller Low-Flow Pond collects surface water run-off during periods with relatively low discharge to allow more efficient aeration of the stormwater. Water from the Low-Flow Pond is then pumped to the larger High-Flow Pond. During higher precipitation events, surface water is pumped directly to the High-Flow Pond.")

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

the wastewater could be of higher strength than allowed by the WDRs⁴. Therefore, it is appropriate to require the Discharger to take interim actions to either prevent an overflow from the high flow pond to surface water or to reduce the volume of leachate entering the high flow pond.

Unauthorized Green Waste Pond

13. Leachate and stormwater generated on the western section of the compost area currently flows south through unlined ditches to an unlined stormwater pond known as the "green waste runoff pond"⁵. The pond overflows to an unlined drainage course, which eventually discharges to the A-1 Channel and surface waters. The Discharger states that the depth of the green waste runoff pond is 18.2 feet MSL⁶. The closest groundwater monitoring wells are 4B and G-2, which had a groundwater elevation of 19.10 and 19.12 feet on 22 March 2011, respectively⁷. These elevations indicate that, at times, groundwater has the potential to rise into the bottom of the green waste runoff pond. The unlined ditches, unlined pond, and off-site discharge of leachate are not described, nor permitted, by the WDRs. Use of this pond to store leachate or stormwater generated from the compost area is a violation of the WDRs. The Discharger has committed in writing, through correspondence dated March 12, 2014, to construct improvements to rectify this issue.
14. Because the green waste runoff pond is not described in the WDRs, Monitoring and Reporting Program (MRP) R5-2008-0188 does not require the Discharger to analyze its contents. However, it is assumed that the green waste runoff pond would contain leachate from the compost area, similar in concentration to the high-flow pond. The use of the unlined green waste pond for storage of leachate and stormwater may have caused or contributed to groundwater pollution in the eastern portion of the landfill. This Order requires that the Discharger document that it has constructed improvements such that runoff from the compost pad is no longer discharged to the green waste runoff pond or to unlined ditches. The Discharger has stated that it will construct these facility improvements by 30 September 2014.

Designated-High-Strength Waste

Historical analysis of the high-flow and low-flow ponds content shows elevated concentrations of inorganic constituents, as shown below. According to the WDRs, the high-flow pond is only to contain stormwater runoff from the active composting area, not leachate, which is why it is allowed to overflow to surface waters. However, the data below show that high-strength waste-designated-waste⁸ is contained in the low-flow and high-

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

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

⁶ 5 June 2014, Recology response to Draft CAO

⁷ Recology first semiannual 2011 monitoring report, Table 2.

⁸ Designated-waste-is-defined-in-Section-13173-of-the-California-Water-Code-as-a-nonhazardous-waste-that,-under-ambient-conditions,-"could-be-released-in-concentrations-exceeding-applicable-water-quality-objectives-or-that-

RECOLOGY HAY ROAD LANDFILL
 SOLANO COUNTY

flow ponds, and that the concentrations exceed the water quality goals and the US EPA Benchmark values used for reference in the Industrial Storm Water General Order. Therefore, it is not appropriate to allow this waste to overflow and discharge to surface waters.

Waste Constituent	Sump ¹	Low Flow Pond ²	High Flow Pond ³	Parameter Benchmark Values ⁴	Water Quality Goals
Specific Conductance, umhos/cm	10,445	3,815	9,395		900 (CA secondary MCL)
Total Dissolved Solids, mg/L			6,900		500 (CA secondary MCL)
Total Suspended Solids, mg/L	1,362	330		100	
Biochemical Oxygen Demand, mg/L	15,750	2,150		30	
Chemical Oxygen Demand, mg/L	32,000	3,900		120	
Chloride, mg/L			1,600	860	250 (CA secondary MCL)
Total Kjeldahl Nitrogen, mg/L			320		NA
Sulfate, mg/L			320		250 (CA secondary MCL)
Lead, mg/L			0.15	0.0816	0.015 (USEPA Primary MCL)
Phosphorous, mg/L			150	2.0	NA
Nitrate as N, mg/L			14		10 (CA secondary MCL)
Ammonia as N, mg/L	895	145	11	19	30 (USEPA Health Advisory)
Nitrite as N, mg/L			0.66		1 (USEPA Primary MCL)

¹Sump in which wastewater from the compost pad is collected prior to being pumped to the low-flow pond. Average values from samples collected in February and April 2010.

²Average of values from samples collected in February and April 2010.

³Samples collected in November 2013

⁴From Table B of the State Water Resources Control Board's *Sampling and Analysis Reduction Certification* to satisfy the requirements of Section B.12.b of the stormwater Industrial General Permit No. 97-03-DWQ.

15. The 2008 MRP does not require sampling of the low-flow pond, nor does it require freeboard measurements for either pond. A Revised MRP has recently been issued for this facility and it contains these requirements. **COMMENT FROM RECOLOGY ON**

~~could reasonably be expected to affect beneficial uses of the waters of the state..." Because the concentrations in the ponds exceed both the water quality goals and the US EPA benchmark values, it is appropriate to classify the pond wastewater as designated waste.~~

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

FINDING NO. 15: As of the date of this submittal (Sept. 3, 2014), no revised MRP has been issued. A draft of a revised MRP was included as part of the previous draft Cleanup & Abatement Order issued on May 7, 2014. Pursuant to a discussion with Regional Board Staff on August 19, 2014, Recology will be submitting specific technical comments on the draft revised MRP in short order.]

Compost Leachate Used for Dust Control Violation

16. As reported in the Discharger's 26 January 2011 *Report of Remedial Actions High-Flow and Low-Flow Ponds*, during the summer of 2010, "Water was removed from the pond and used for dust control over lined portions of the landfill. Draining the pond required removal of approximately 10 million gallons of liquid through evaporation and dust control."
17. ~~The use of compost leachate for dust control on the landfill units is a violation of~~ Discharge Specification B.13 ~~which~~ states "Leachate or landfill gas condensate from a lined landfill module shall be discharged either to a publicly owned treatment works under permit, or to the composite-lined landfill unit from which it was generated...." This section does not mention the use of compost water for dust control. In addition, the use of compost leachate as dust control is a violation of section 20375(d) of Title 27, which states "There shall be no discharge from a surface impoundment except as authorized by WDRs". Section 20340(g) of Title 27 also states that leachate may only be applied to the unit from which it was derived, unless the Water Board specifically authorizes otherwise. The application of compost leachate as dust control is not authorized by the WDRs and therefore this action is a violation of the WDRs. This Order provides the Discharger a time schedule line to either cease the use of compost leachate for dust control, or to submit a RWD to revise the WDRs to allow this action.

Separation Between Waste and Groundwater

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

Construction Specification D.2

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

RECOLOGY HAY ROAD LANDFILL
 SOLANO COUNTY

Land treatment unit (LTU)	5 feet
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19. ~~Prohibition A.4 of the WDRs prohibits a discharge of waste constituents to the unsaturated zone. The engineered alternative to the prescriptive five feet of separation between waste and groundwater is intended to ensure that the Prohibition is met. The WDRs require that the Discharger report the separation distance between the disposal module leachate-collection and removal system (LCRS) sumps (i.e., the bottom of the waste) and groundwater. Groundwater is typically highest in the spring. The separation reported for the spring monitoring events from 2011 through 2013 is summarized below:~~

Separation Data for Spring-time Monitoring, 2011 to 2013

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

20. ~~As shown above, the Discharger was in violation of Construction Specification D.2 at DM-1 for the March and May 2011 monitoring events⁹. It is unknown if there were other violations as, in general, the monitoring reports do not clearly show whether the Discharger is complying with Construction Specification D.2 and therefore with Prohibition A.4. For example, the Discharger rounds the groundwater elevation to the nearest foot, groundwater data is interpolated from site-wide gradient maps, some of the monitoring wells that appear to be used for compliance are on the other side of the slurry wall from the pan lysimeters, and the Discharger does not monitor for groundwater elevation at the LTU. In addition, references for the source of the sump elevations (i.e., as-built drawings with final survey data) and the elevations of the lowest point in the modules (i.e., the pan lysimeters) are not provided in the Discharger's monitoring reports. Although the Discharger has stated that it believes its monitoring and reporting practices to be appropriate, Water Board staff finds that it is not possible to determine whether the Discharger is in compliance with the required separation to groundwater.~~

21. ~~In order to fully evaluate compliance with Construction Specification D.2, and to determine whether or not there is a threatened discharge in violation of Prohibition A.4, this Order provides a time schedule (a) for the Discharger to install monitoring devices specifically designed to determine compliance with Construction Specification D.2, (b) for the Discharger to demonstrate compliance with Construction Specification D.2 by using the closest well or piezometer to the LCRS, (c) by reporting the elevations in units of ± 0.1 foot,~~

⁹ The Discharger asserts that the lack of separation was due to intermittent borrow pit dewatering.

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

~~(d) for the Discharger to propose a method to immediately lower the groundwater in the event that a violation of Construction Specification D.2 is reported, and (e) for the Discharger to submit as-built drawing records which document the surveyed elevation of the bottom of each disposal module's sump.~~

RUNOFF AND DRAINAGE CONTROLS

- 22 18 Section 20365 of Title 27 defines the performance standard for landfill runoff and drainage controls, and states: *"Units and their respective containment structures shall be designed and constructed to limit, to the greatest extent possible, ponding, infiltration, inundation, erosion, slope failure, washout, and overtopping under the precipitation conditions specified in Table 4.1 (of this article). Prohibitions A.4 and A.5 of the WDRs prohibit the discharge of waste constituents to the unsaturated zone or to groundwater and prohibit the discharge of waste outside of a unit or portions of a unit.*
- 23 19 Inadequate drainage may lead to slope failure and/or the creation of leachate, and result in a threatened discharge of waste or waste constituents, in violation of Prohibitions A.4 and A.5. The WDRs include Facility Specification C.10 which provides a performance measure for drainage controls, and states: *"Precipitation and drainage control systems shall be designed and constructed to accommodate the anticipated volume of precipitation and peak flows from surface runoff under 1,000-year, 24-hour precipitation conditions."* Table 4.1 of Section 20365 of Title 27 shows that the 1,000-year, 24-hour precipitation event applies to Class II landfill units, while Class III units are held to a 100-year, 24-hour precipitation event.
- 24 20 During a 31 January 2014 site inspection, Water Board staff observed that the storm water down drains and ditches appeared to be undersized and/or inadequately graded to allow stormwater runoff to move off the landfill as quickly as possible.
- 25 21 Inadequate drainage may result in oversaturation of the slopes potentially resulting in a slope failure. Inadequate drainage may also allow stormwater to percolate into the waste mass which contributes to the creation of leachate and landfill gas. This Order requires the Discharger to re-evaluate its drainage control systems to ensure that the drainage control systems for the Class II units comply with Specification C.10 of the WDRs (designed for the 1,000 year, 24-hour precipitation event) while the drainage control systems for the Class III units comply with Section 20365 of Title 27 (designed for the 100 year, 24-hour precipitation event). The Discharger has previously committed in writing to undertake a landfill drainage reevaluation.

TEMPORARY FILL SLOPE STABILITY

- 26 22 Facility Specification C.2 of the WDRs states "Waste filling at landfill modules shall be conducted in accordance with a fill plan demonstrating that all temporary refuse fill slopes will be stable under both static and dynamic conditions for the design event for the unit."

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

23. The Discharger prepared a slope stability analysis which is included in the 2007 Post Closure and Post Closure Maintenance Plan (PCPCMP). While the PCPCMP states that the final cover's side slopes will have a maximum slope of 4H:1V (horizontal to vertical), the PCPCMP does not address the appropriate slope for the temporary interior areas of the landfill.
- 27 24. Figure 1 of the Discharger's 2013 Winterization Plan indicates that the uppermost slopes and/or stockpiles at DM-1, DM-2.2, and DM-11 are in the range of approximately 2.5H:1V. It is unknown if these interior slopes meet the stability requirements of Facility Specification C.2. Therefore, this Order requires the Discharger to submit an analysis of the appropriate slope for "temporary"¹⁰ refuse fill slopes" under both static and dynamic conditions using the performance criteria of Title 27, and if necessary, make facility modifications.

FLOOD PROTECTION

- 28 25. Finding 11 of the WDRs states that about one-half of the existing landfill and 80% of the expansion area are within the 100 year floodplain, which is estimated to be at an elevation of 25 feet MSL. Federal regulations, as incorporated by State Water Board Resolution 93-62, require that a discharger whose new or existing landfills are located within a 100 year floodplain must demonstrate that the landfill location will not "result in the washout of solid waste so as to pose a hazard to human health or the environment". The Discharger has stated that there is a 40 foot MSL exterior perimeter berm around most of the landfill, except for portions of module DM-1. This berm is intended to prevent the washout of waste in a 100-year flood. Although not described in the WDRs, the Discharger states that, in addition to providing flood protection, the berms are also intended to provide stability in the event of an earthquake.
- 29 26. The WDRs require that the facility be protected from a 100-year flood and also prohibit the discharge of waste outside a unit. Specifically,

Construction Specification D.9 states: *The Discharger shall construct and maintain berms along the exterior of each landfill unit as necessary to prevent inundation and washout of wastes from a 100-year flood.*

Facility Specification C.12 states: *The Discharger shall prevent floodwaters from a 100-year flood from contacting wastes in a disposal module. As the site is developed, a flood protection and slope stability levee (or berm) shall be constructed around the site to at least 40 feet above mean sea level to prevent flood waters from a 100-year flood from entering the site.*

¹⁰ Defined as areas which have not reached the final elevation grade.

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

Prohibition A.5 states: "*The discharge of wastes outside of a Unit or portions of a Unit specifically designed for their containment is prohibited.*"

30 27. Inadequate flood protection creates a threatened discharge of waste during a flood event, in violation of WDR Prohibition A.5. The Discharger's 2013 topographic site plan (i.e., the *Recology Hay Road 2013 Winterization Plan*) indicates that some exterior berms along the north side of the facility may not meet the specification in the WDRs of a berm height of at least 40 feet MSL around the site. In addition, the Discharger has stated¹¹ that in addition to providing flood protection, the berm "*provides additional stability against global failure of the waste mass (movement along the base liner system).*" However, the Discharger has also stated that the 100-year flood elevation is at about 25 feet, and therefore Facility Specification C.12 should be re-evaluated. Therefore, this Order requires that either the Discharger (a) submit a site drawing which indicates the location, distance, and height of all perimeter berms, and indicates whether the berms meet the requirements of the WDRs, or (b) submit a RWD requesting a change to Facility Specification C.12 and including an engineering evaluation of the height of the berms necessary to provide stability to prevent global failure of the waste mass.

REGULATORY CONSIDERATIONS

31 28. 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.

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

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

¹¹ 5 June 2014 Recology comments on draft CAO

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

34 31 Water Code section ~~43304-13300~~ states in relevant part,

When a regional board finds that a discharge of waste is taking place or threatening to take place ~~that violates or will violate in violation of~~ requirements ~~or discharge prohibitions~~ prescribed by the regional board, or the state board, . . . , the board may ~~require the discharge to submit for approval of the board, with such modifications as it deems necessary, a detailed issue an order to cease and desist and direct that those persons not complying with the requirements or discharge prohibitions-~~ (a) ~~comply forthwith,~~ (b) ~~comply in accordance with a time schedule~~ of specific actions the discharge shall take in order to correct or prevent a set by the board, or (c) ~~in the event of a threatened violation of requirements,~~ take appropriate remedial or preventative action.

35 32 As a result of the events and activities described in this Order, the Central Valley Water Board finds that a discharge of waste is taking place or threatening to take place in violation of WDRs Order R5-2008-0188. This Order requires the Discharger to take appropriate remedial action and to comply in accordance with the time schedule set forth below.

36 33 Water Code section 13267 subdivision (b)(1) states, in relevant part:

In conducting an investigation specified in subdivision (a), the regional board may require that any person who has discharged, discharges, or is suspected of having discharged or discharging, or who proposes to discharge waste within its region . . . shall furnish, under penalty of perjury, technical or monitoring program reports which the regional board requires. The burden, including costs, of these reports shall bear a reasonable relationship to the need for the report and the benefits to be obtained from the reports. In requiring those reports, the regional board shall provide the person with a written explanation with regard to the need for the reports, and shall identify the evidence that supports requiring that person to provide the reports.

37 34 The technical reports required by this Order are necessary to ensure compliance with this Order and WDRs Order R5-2008-0188, and to ensure the protection of water quality. Recology Hay Road owns and operates the facility that discharges waste subject to this Order and WDRs Order R5-2008-0188.

38 35 The issuance of this Order is being taken for the protection of the environment and as such is exempt from provisions of the California Environmental Quality Act (Pub. Resources Code, § 21000 et seq.) pursuant to California Code of Regulations, title 14, sections 15061 subdivision (b)(3), 15306, 15307, 15308, and 15321 subdivision (a)(2).

39 36 On XX October 2014, in Rancho Cordova, California, after due notice to the Discharger and all other affected persons, the Central Valley Water Board conducted a public hearing at which evidence was received to consider a Time Schedule Cease and Desist Order under Water Code section ~~13300~~43301 to establish a time schedule to achieve compliance with waste discharge requirements.

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

IT IS HEREBY ORDERED that, pursuant to Water Code sections ~~13300~~13304 and 13267, Recology Hay Road shall implement the following measures necessary in order to comply with WDRs Order R5-2008-0188.

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

Compost Area

1. **By 1 November 2014**, the Discharger shall submit a *Compost Area Stormwater Modification* technical report documenting that it has made facility modifications such that (a) compost area stormwater and leachate are only discharged to lined ditches, the low-flow pond, and the high-flow pond, and (b) that compost area stormwater and leachate does not flow into the green waste pond. The report shall describe the modifications that have made and include diagrams and maps indicating flow directions.
2. **By 1 December 2014**, the Discharger shall submit either:
 - (a) a *Compost Ponds ReConfiguration* technical report documenting that it has made facility modifications such that leachate is stored in the low flow pond and stormwater is stored in the high flow pond as described in Finding 88 of the WDRs, or
 - (b) a statement that it intends to submit a Report of Waste Discharge (RWD) by 1 February 2015, with the contents as described in Item No. 3, below. For the interim period until the WDRs are revised, the Discharger shall not allow the wastewater in either pond to overflow into surface waters. In addition, the Discharger shall submit a technical report describing how it will inspect and manage the ponds in the interim period to prevent overflows (e.g. enhanced evaporation, transport to a POTW, use as compost conditioning, etc.).
3. **If the Discharger does not submit the *Compost Ponds Reconfiguration Report***, then by **1 February 2015**, the Discharger shall submit a RWD requesting that the WDRs be revised to such that the two compost ponds may be operated in a manner other than as described in the WDRs. The RWD shall be submitted after consultation with Central Valley Water Board Permitting staff, in order to determine the supporting data which must be submitted. If the WDRs are not revised by 15 February 2016, then the Discharger must make facility modifications such that it complies with Finding 88 no later than 1 April 2016.
4. **By 1 February 2015**, the Discharger shall submit either:
 - (a) a *Food Waste In-Vessel Composting* technical report documenting the facility modifications that have been made such that all food waste composting is conducted

in an in-vessel manner, as required by Discharge Specification B.27 of the WDR, or

- (b) after consultation with the Central Valley Water Board's Permitting Unit, the Discharger may submit a RWD requesting that the WDRs be revised in order to allow that food waste composting take place outside of vessels. The RWD must show how non-vessel composting will be protective of water quality and prevent nuisance conditions. If the WDRs are not revised by 15 February 2016, then by 1 April 2016, the Discharger must comply with Discharge Specification B.27.

5. **By 1 February 2015**, the Discharger shall submit either:

- (a) a *Compost Leachate Dust Control* technical report documenting that leachate from the compost ponds are no longer used for dust control on the landfill, or
- (b) After consultation with the Central Valley Water Board's Permitting Unit, the Discharger may submit a RWD requesting that Discharge Specification B.13 of the WDRs be revised in order to specifically allow the use of compost leachate as dust control. The RWD must describe how the leachate will be applied in a manner that protects water quality. If the WDRs are not revised by 15 February 2016, then the Discharger may not use compost leachate as dust control.

If the Discharger chooses option 5(b), then prior to 15 February 2015, the Discharger may use compost leachate for dust control if it is done in a manner¹² that does not cause instability of the waste, does not cause leachate seeps, does not generate additional landfill gas that is not captured by the active landfill gas extraction system, does not cause contaminants to enter surface water, does not cause leachate volumes to exceed the maximum capacity of the LCRS, and does not cause the LCRS to be operated in violation of Construction Specification D.4 of the WDRs. In addition, the Discharger shall maintain a log describing the use of compost leachate as dust control. The log shall include date, volume used as dust control, source of water (i.e., which pond), and location of use. The log shall be submitted with the semiannual monitoring reports.

Separation to Groundwater

- ~~6. Beginning with the fourth quarter 2014, the Discharger shall report compliance with Discharge Specification D.2 (separation between waste and groundwater) using the groundwater monitoring point closest to each LCRS sump and reporting data in units of 0.1 foot.~~
- ~~7. By 15 March 2015, in order to demonstrate whether the facility is in compliance with the required separation between waste and underlying groundwater, the Discharger shall~~

¹² From Discharge Specification B.13 of the WDRs

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

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

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

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

Runoff and Drainage Controls

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

Temporary Fill Slope Stability

By 15 March 2015, the Discharger shall submit a *Temporary Fill Slope Stability* technical report containing an analysis of the appropriate slope for "temporary¹³ refuse fill slopes" under both static and dynamic conditions using the performance criteria of Title 27 Section 2170(f)(5). The report shall show whether or not the temporary refuse fill slopes comply with Facility Specification C.2 and shall contain a map showing the existing slope (H:V) for all temporary fill areas. If the evaluation shows that the current slopes do not meet criteria of Facility Specification C.2, then the Discharger shall include a workplan and proposed timeline to make facility modifications.

Flood Protection

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

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

11 7 **By 1 February 2015**, the Discharger shall either submit (a) a *Flood Protection* technical report containing a site drawing which indicates the location, distance, and height of all perimeter berms, and description of whether the berms comply with WDR Specifications C.12 and D.9, and if not, a workplan and proposed timeline to return to compliance, or (b) a RWD requesting a change to the flood control requirements of Specifications C.12 and D.9, which includes an engineering evaluation of the height of the berms necessary to provide stability to prevent global failure of the waste mass.

Other Requirements

12 8 All data, technical reports and plans, and monitoring reports prepared by the Discharger after the date of this Order shall be uploaded to the State Water Resources Control Board's web-based Geotracker database system (<http://geotracker.waterboards.ca.gov>), in compliance with the requirements of Title 23 Section 3890 et seq. This includes uploading all reports, plans, and data required under this Order and under any Order or permit issued by the State Water Quality Control Board.

13 9 As required by the California Business and Professions Code sections 6735, 7835, and 7835.1, all reports shall be prepared by, or under the supervision of, a California Registered Engineer or Professional Geologist and signed by the registered professional. Each technical report submitted by the Discharger shall contain the professional's signature and/or stamp of the seal.

14 10 As required by Provision G.6a, G.6d, and G.6e of WDRs Order R5-2008-0118, all reports and transmittal letters shall be signed by either a principal executive officer of the corporation with at least the level of senior vice-president or a duly authorized representative in accordance with Provision G.6d of the WDRs, and any person signing a document submitted to comply with this Order shall make the following certification:

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

11. The Discharger agrees through this Order, which it has proposed and submitted for the approval and adoption by the Central Valley Regional Water Quality Control Board, that the requirements set forth in the Order may be enforced under Section 13350 of the Water Code in the same manner as if this Order constituted a Cease & Desist Order. The Discharger hereby waives any future objection, to the extent that such objection is premised on the ground that this Order is entitled a Time Schedule Order, to such future enforcement.

RECOLOGY HAY ROAD LANDFILL
SOLANO COUNTY

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

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

Any person aggrieved by this action of the Central Valley Water Board may petition the State Water Board to review the action in accordance with Water Code section 13320 and California Code of Regulations, title 23, sections 2050 and following. The State Water Board must receive the petition by 5:00 p.m., 30 days after the date of this Order, except that if the thirtieth day following the date of this Order falls on a Saturday, Sunday, or state holiday, the petition must be received by the State Water Board by 5:00 p.m. on the next business day. Copies of the law and regulations applicable to filing petitions may be found on the Internet at: http://www.waterboards.ca.gov/public_notices/petitions/water_quality or will be provided upon request.

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

PAMELA C. CREEDON, Executive Officer

(Date)

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

~~MB/HDHWSW: 13 August 2014
Proposed by Recology 3 September 2014~~

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

RECOLOGY HAY ROAD

**RECOLOGY'S WITNESS LIST (SEPT. 3, 2014)
FOR THE OCTOBER 9-10, 2014 PUBLIC HEARING**

The time periods indicated below are estimations. The actual time of the testimony of the individual witnesses may vary, subject to the overall one-hour limit for the presentation of Recology's testimony and arguments. In addition, Recology and its attorneys (Perkins Coie LLP) reserve the right, as provided for in the Hearing Procedure in this matter, to conduct cross-examinations of the Prosecution Team's witnesses, to present relevant legal arguments, and to make a closing statement, subject to the overall one-hour time limit.

LIST OF FACT WITNESSES

Paul Yamamoto (10 minutes)

Recology, Group Manager, Organics & Landfill Operations

Testimony on the company and its philosophy and on the regulatory process for Hay Road

Mike Delmanowski, P.G., C.E.G., C.Hg (15 minutes)

EBA Engineering, Senior Hydrogeologist

Certified Hydrogeologist, Certified Engineering Geologist, Professional Geologist

Testimony on technical surface water and groundwater issues at Hay Road

Kris Johnson, P.G., C.E.G. (15 minutes)

Golder Associates Inc., Certified Engineering Geologist, Professional Geologist

Testimony on the separation between groundwater and landfill waste

Bryan Clarkson (10 minutes)

Recology, Group Environmental Manager

Testimony on site operations

Tim Daleiden (5 minutes)

Recology, Engineering Project Manager

Testimony on engineering matters at Hay Road

Drew Lehman (5 minutes)

Recology, Director, Environmental & Planning Department

Testimony on the regulatory process for Hay Road

**CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION**

**RECOLOGY HAY ROAD
EVIDENTIARY EXHIBIT LIST**

**SUBMITTED ON SEPTEMBER 3, 2014
FOR THE OCTOBER 9-10, 2014 PUBLIC HEARING**

NOTE: Pursuant to the Hearing Procedure in this matter, the following exhibits are hereby submitted by reference. All of the exhibits have been submitted to or issued by Central Valley Regional Water Quality Control Board staff and therefore should be in the files in the Regional Board's offices in Rancho Cordova, CA. In addition to the original transmittal, the documents recently were provided by Recology to Regional Board staff by CD in connection with the following submittals: (1) Recology's June 5, 2014 comments on the draft Cleanup & Abatement Order issued on May 7, 2014; and (2) Recology's Revised Notice of Intent under General WDRs R5-2008-0149 (June 18, 2014); and (3) Recology's Revision #2 to the Notice of Intent under General WDRs R5-2008-0149 (Sept. 2, 2014). Documents will be provided by CD upon request.

1. Sept. 2, 2014, Recology's Revision 2 to Notice of Intent under General WDRs R5-2008-0149 for In-Situ Groundwater Remediation (issued to RWQCB enforcement staff; already on file with the RWQCB)
2. Aug. 25, 2014, Central Valley Regional Water Quality Control Board, Tentative Cease & Desist Order, Recology Hay Road (Revision 2) (issued by RWQCB enforcement staff; already on file with the RWQCB)
3. Aug. 5, 2014, correspondence from Drew Lehman to Wendy Wyels, Compost Pad Drainage Improvements, Jepson Prairie Organics
4. July 25, 2014, correspondence from Drew Lehman to Wendy Wyels, submitting preliminary comments on July 11, 2014 version of the Tentative Cease & Desist Order, Recology Hay Road (submitted to RWQCB enforcement staff; already on file with the RWQCB)
5. July 18, 2014, correspondence from Drew Lehman to Wendy Wyels, submitting comments on the Proposed Hearing Procedure for the Tentative CDO, Recology Hay Road (submitted to RWQCB enforcement staff; already on file with the RWQCB)
6. June 18, 2014, Revised Notice of Intent under General WDRs R5-2008-0149 for In-Situ Groundwater Remediation (issued to RWQCB enforcement staff; already on file with the RWQCB)
7. June 5, 2014, correspondence from George McGrath to Pamela Creedon (with attachments, including CD), submitting legal and technical comments on draft Cleanup & Abatement Order, Recology Hay Road issued by RWQCB staff (submitted to RWQCB administrative and enforcement staff; already on file with the RWQCB)
8. May 7, 2014, draft Cleanup & Abatement Order, Recology Hay Road, issued by RWQCB staff (issued by RWQCB enforcement staff; already on file with the RWQCB)

9. March 12, 2014, correspondence from Greg Pryor to Mary Boyd, transmitting March 12, 2014 report prepared by Golder Associates, Recology Hay Road (submitted to RWQCB enforcement staff; already on file with the RWQCB)
10. Jan. 26, 2011, Golder Associates, Report of Remedial Actions, Compost High-Flow and Low-Flow Ponds (transmitted to Regional Board staff via letter from Bryan Clarkson to Mary Boyd dated Feb. 14, 2011) (submitted to RWQCB staff in 2011 and again on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
11. Sept. 17, 2010, Correspondence from Bryan Clarkson to Victor Izzo, enclosing design drawings from Brown & Caldwell) (submitted to RWQCB staff in 2010 and again on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
12. Sept. 16, 2010, Golder & Associates, Liner Repair Plan for the Compost Area Storm Water Pond (transmitted to Regional Board staff via letter from Greg Pryor to Mary Boyd, dated Sept. 20, 2010) (submitted to RWQCB staff in 2010 and again on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
13. Apr. 22, 2010, Letter from Mary Boyd to Greg Pryor (issued by RWQCB enforcement staff in 2010 and submitted by Recology to RWQCB staff on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
14. Sept. 8, 2006, Kleinfelder, Compost Area Storm Water Pond Design (submitted to Jeffrey Huggins, RWQCB staff in 2006 and submitted again to RWQCB staff on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
15. July 17, 1996, Einarson, Fowler & Watson, Proposed Method to Achieve Five Feet of Separation Between Waste and Groundwater and Groundwater for Disposal Module 1, B&J Drop Box Sanitary Landfill (submitted to RWQCB on CD as part of Recology's correspondence of June 5, 2014 [see item #7 above]; already on file with the RWQCB)
16. Feb. 1995, Einarson Geoscience, Inc. Geology and Hydrogeology, B&J Drop Box Sanitary Landfill (submitted to RWQCB as part of Revised NOI and Revision 2 to the NOI under General WDRs R5-2008-0149 for In-Situ Groundwater Remediation, submitted in June and September 2014, respectively [see items #1 and 6 above]; already on file with the RWQCB)
17. 2005-2014, Semi-Annual and Monitoring Reports, Recology Hay Road Landfill (these 19 monitoring reports, which are listed individually below, have all been submitted to RWQCB staff; all of the reports already are on file with the RWQCB)
 - a. First Semi-Annual 2014 Monitoring Report (July 2014)
 - b. Second Semi-Annual and Annual 2013 Monitoring Report (Jan. 2014)

- c. First Semi-Annual 2013 Monitoring Report (July 2013)
- d. Second Semi-Annual and Annual 2012 Monitoring Report (Jan. 2013)
- e. First Semi-Annual 2012 Monitoring Report (July 2012)
- f. Second Semi-Annual and Annual 2011 Monitoring Report (Jan. 2012)
- g. First Semi-Annual 2011 Monitoring Report (July 2011)
- h. Second Semi-Annual and Annual 2010 Monitoring Report (Jan. 2011)
- i. First Semi-Annual 2010 Monitoring Report (July 2010)
- j. Second Semi-Annual and Annual 2009 Monitoring Report (Jan. 2010)
- k. First Semi-Annual 2009 Monitoring Report (July 2009)
- l. Second Semi-Annual and Annual 2008 Monitoring Report (Jan. 2009)
- m. First Semi-Annual 2008 Monitoring Report (July 2008)
- n. Second Semi-Annual and Annual 2007 Monitoring Report (Jan. 2008)
- o. First Semi-Annual 2007 Monitoring Report (July 2007)
- p. Second Semi-Annual and Annual 2006 Monitoring Report (Jan. 2007)
- q. First Semi-Annual 2006 Monitoring Report (July 2006)
- r. Second Semi-Annual and Annual 2005 Monitoring Report (Jan. 2006)
- s. First Semi-Annual 2005 Monitoring Report (July 2005)