

DelFrate, Todd@Waterboards

From: Wyels, Wendy@Waterboards
Sent: Tuesday, December 09, 2014 8:35 AM
To: Hold, Howard@Waterboards; DelFrate, Todd@Waterboards
Subject: FW: Transmittal of Recology's Response to Regional Board's December 3rd e-mail on Recology Yuba Sutter/Feather River Organics
Attachments: 2014.12.08 Recology Yuba Sutter Report on Stormwater at FRO with Letter.pdf
Follow Up Flag: Follow up
Flag Status: Flagged

From: Drew Lehman [<mailto:dlehman@recology.com>]
Sent: Monday, December 08, 2014 5:50 PM
To: Wyels, Wendy@Waterboards
Cc: Altevogt, Andrew@Waterboards; Dave Vaughn; Paul Yamamoto; Phil Graham; Okamoto, Mayumi@Waterboards; 'Bruner, Marc R. (Perkins Coie)'
Subject: Transmittal of Recology's Response to Regional Board's December 3rd e-mail on Recology Yuba Sutter/Feather River Organics

December 8, 2014

Hello Wendy – attached please find two items:

- 1) A letter report from Recology on the lead up to the December 3rd rainfall events covered in your inspection memo. This report also addresses subsequent steps that Recology has taken to improve the collection system performance as we continue to implement system upgrades to prevent the problem that occurred on December 3 from recurring during future storm events.

- 2) A letter report from Golder Associates assessing the performance of the compost stormwater management system at Feather River Organics and their recommendations to improve the operating performance of the system to accommodate the 24 hour, 3.16 in design storm event.

Please be assured that we take this matter very seriously and recognize our responsibility to make sure that the new collection system at the site is working properly. If you have any questions, please feel free to me or Dave Vaughn at (530)749-4202.

Thank you,

Drew

Drew Lehman
Director, Environment & Planning

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WASTE ZERO



December 8, 2014

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

**RE: Feather River Organics, Marysville, CA
Central Valley Regional Water Quality Control Board December 3, 2014 Inspection**

Dear Ms. Wyels:

This letter is in response to your email of December 3 regarding the compost water collection system at Recology's Feather River Organics compost. We take this matter very seriously and we recognize our responsibility to make sure that the new collection system at the site is working properly. Since your staff's December 3 inspection, we have taken a number of steps to improve the collection system, and we are continuing to implement system upgrades to prevent the problem that occurred on December 3 from recurring during future storm events. We have been in regular contact with Regional Board staff, including via telephone and email on December 4th and 5th (see attached), to provide daily updates on the measures we have taken and will continue to take. The measures being implemented at the site are outlined again below. We believe it would be productive to set up a face-to-face meeting with you and your staff to discuss the matter, the corrective measures being instituted, and next steps.

Prior to rains at the end of November and beginning of December, there were several smaller storm events during which Recology tested and observed the performance of the site's compost water collection system. No overflow from the system occurred during these rain events. In an ongoing effort to improve system performance, Recology constructed several system upgrades prior to the Thanksgiving holiday, including increasing the pipe size and horsepower of the pumping equipment and reconfiguring the system to activate the pumps more quickly upon a rain event. During the rainy days that preceded the December 3 storm, the system was working properly and as of the evening of December 2 the collection system was empty and ready to receive water.

On December 3, a significant amount of rain fell within a short time-frame, and an overflow from the tank system occurred. However, during the morning of December 3 prior to the inspection by Regional Board staff, at approximately 9:10 am, Recology personnel conducted an inspection and did not observe any problems with the collection system. During the Regional Board staff inspection at approximately 10:30 am on December 3, Recology personnel were surprised at the overflow conditions that occurred.

Our preliminary review has indicated two primary causes for the overflow. First, the amount of compost water generated on December 3 exceeded the capacity of the collection system. Second, the water did not flow from one tank to the next as designed; this issue with equalizing the volume of the tanks meant that there was still some capacity remaining in some of tanks when the overflow occurred. We believe this could have been caused by sedimentation accumulation in the bottom of the tanks and that this condition impeded system performance. Sedimentation also appears to have impeded the performance of the pumping equipment used to convey water into the tanks.

Ms. Wendy Wyels
CVRWQCB
December 8, 2014

Recology has completed a number of measures—and will continue to institute corrective measures—to rectify these issues and prevent their recurrence:

- On December 4-5, the site installed eight additional storage tanks, for a total storage capacity of 400,000 gallons (20 tanks). The site has ordered eight additional tanks for installation this week, to achieve a total storage capacity of 560,000 gallons (28 tanks). Thus, the tank storage system will be more than doubled, from 12 tanks to 28 tanks.
- The site will have a manned night watch during potential storm events to consistently observe system performance, and key Recology personnel will be contacted immediately upon any issues arising with the system.
- As of December 5, the water that accumulated in the "Hog Farm" area as a result of the December 3 overflow has been fully pumped out of this area for disposal or use as makeup water in the compost process; there were no discharges from the Hog Farm to any areas off of the property.
- The site is directing as much water as is feasible to the local wastewater POTW to ensure maximum tank storage capacity prior to storm events. The site will also utilize captured contact water for compost make up water to the maximum extent achievable in accordance with sound composting and site management practices.
- Inflow piping and inlets are being improved, which will better distribute the inflow of water among the tanks to facilitate more efficient equalization of liquids in the tanks.
- As of December 5, tank and pipe connection clean outs were installed to remove sediments in the tank plumbing.
- As of December 5, additional plumbing has been installed to ensure multiple liquid transfer connections and free flow of liquids between tanks and to maximum use of available tank volumes. This additional plumbing also is being installed on tanks recently delivered to the site.
- As of December 5, wattles have been placed at the base of finished product piles and stored materials to reduce sediment loading to the collection system.
- As of December 5, sand bags have been added to several areas to prevent erosion and overflow.
- The site has used and will continue to use a vacuum truck to remove excess sediment from containment structures.
- Three hundred and forty (340) hay bales have been delivered and are on site for placement to channelize overflow from the tank conveyance system.
- Larger diameter discharge pipes are being installed to provide increased pumping capacity.
- A temporary visqueen basin is being constructed at the outfall of vault 2 in the Hog Farm to contain any overflow as a protective measure if necessary.

Ms. Wendy Wyels
CVRWQCB
December 8, 2014

- Portable internal combustion drive pumps will be provided as back-up pumping systems, and the system is being set up to provide portable electric power in case of a power outage.

Recology is committed to achieving compliance at its Feather River Organics site and ensuring that the compost water collection system functions properly.

Thank you for your time and consideration

Sincerely,



Drew Lehman
Director Environment and Planning



Dave Vaughn
Vice President and Group Manager

Attachments

- cc: P. Donoho, Yuba County Environmental Health Department
A. Altevogt, M. Okamoto, Water Board
K. Haskell, Golder Associates
B. Schussman, Perkins Coie

Ms. Wendy Wyels
CVRWQCB
December 8, 2014

Attachments - Email Reports of December 4 & 5

From: Phil Graham
Sent: Thursday, December 04, 2014 4:55 PM
To: Wyels, Wendy@Waterboards; 'DeIfrate, Todd@Waterboards'
Cc: Paul Yamamoto; Dave Vaughn; Drew Lehman
Subject: Feather River Organics Update

Wendy and Todd –

I would like to give you an update on our efforts thus far to address concerns noted during the December 3, 2014 inspection. We have or are in the process of completing the following tasks:

- We are adding 8 tanks for an added capacity of 160,000 gallons
- Golder is on site to evaluate system functionality and make additional recommendations for improved performance
- We have set up manned night watch during potential storm events until upgrades are completed
- Water accumulated in the hog farm area will be pumped into the storage tanks for disposal or use tonight
- We are directing as much water as is feasible to the POTW to ensure maximum tank volumes before storms
- Wattles have been placed at the base of finished product piles and stored materials to reduce sediment loading to pumping systems
- We are utilizing captured storm water for compost make up water
- Sand bags have been added to several areas to prevent erosion
- We are using a vactor truck to remove excess sediment from structures
- Additional plumbing is being installed to ensure multiple liquid transfer connections and free flow of liquids between tanks as well as maximizing the utility of available tank volumes
- Clean outs are being installed to assist with sediment removal
- Inflow piping is being reconfigured to allow better distribution to tanks
- The inlets to several of the 6 inch conveyance pipes that direct water to the hog farm area vaults are being improved
- We are working of a more comprehensive report to be submitted by Monday as requested

Please don't hesitate to call if you have any questions.

Ms. Wendy Wyels
CVRWQCB
December 8, 2014

From: Phil Graham
Sent: Friday, December 05, 2014 5:12 PM
To: Wyels, Wendy@Waterboards; 'DelFrate, Todd@Waterboards'
Cc: Paul Yamamoto; Dave Vaughn; Drew Lehman
Subject: Feather River Organics (FRO) Update II

Wendy and Todd –

As a follow up to my e-mail update yesterday, I would like to give you a day 2 update on our efforts thus far to address concerns noted during the December 3, 2014 inspection. We have or are in the process of completing the following tasks :

- In progress - Recology received the Monitoring and Reporting Program for the compost facility and are implementing the daily requirements today
- Completed - On December 4 and 5, 2014, 8 tanks were added for a total storage capacity of 400,000 gallons (total of 20 tanks)
- In progress - Golder was on site on December 4 to evaluate system functionality and will be making additional recommendations for improved performance. Their evaluation is ongoing.
- Ongoing - We are continuing with manned night watch during potential storm events until upgrades are fully complete
- Completed - Water accumulated in the hog farm area down gradient of the second vault was pumped into the storage tanks for disposal or use as compost make up water today
- Ongoing - We are directing as much water as is feasible to the POTW to ensure maximum tank volumes before storms
- Completed - Wattles have been placed at the base of finished product piles and stored materials to reduce sediment loading to pumping systems
- Ongoing - We are utilizing captured storm water for compost make up water
- Completed - Sand bags have been added to several areas to prevent erosion
- Ongoing - We have used and will continue using a vacuum truck to remove excess sediment from containment structures
- Completed - Additional plumbing has been installed to ensure multiple liquid transfer connections and free flow of liquids between tanks as well as maximizing the utility of available tank volumes
- Completed - Clean outs have been installed to assist with sediment removal in the tanks plumbing
- Completed - Inflow piping has been reconfigured to allow better distribution to tanks
- Ongoing - Improvements to the inlets to several of the 6 inch conveyance pipes that direct water to the hog farm area vaults are ongoing
- Ongoing - We are working on a more comprehensive report to be submitted by Monday as requested

I also left you a voice mail message to possibly meet on Monday afternoon to discuss our report and update you on progress and the newly implemented MRP. Please don't hesitate to call if you have any questions.



TECHNICAL MEMORANDUM

Date: December 8, 2014
To: Phil Graham
From: Ken Haskell, P.E.; Joel Kelsey
cc: Drew Lehman, Recology
Project No.: 1301525
Company: Feather River Organics
RE: PRELIMINARY ASSESSMENT OF THE COMPOST STORMWATER MANAGEMENT SYSTEM AT THE FEATHER RIVER ORGANICS FACILITY

1.0 INTRODUCTION

This memorandum presents Golder's assessment of the performance of the compost stormwater management system at the Feather River Organics (FRO) Facility in Marysville, California based on recent rainfall events. In addition, we are providing recommendations to improve the operating performance of the compost stormwater management system to accommodate the 24 hour, 3.16-inch design storm event.

2.0 COMPOST LEACHATE COLLECTION SYSTEM PERFORMANCE REVIEW

The FRO Facility received several precipitation events from October through November 2014. During these precipitation events, Recology has indicated that the collection system was operable and contained the compost surface water run-off without any unauthorized discharge.

On December 3, 2014 the FRO Facility received a significant precipitation event of 1.86-inches of rain measured by the on-site weather station. The majority of this rain occurred in a three hour period. The compost stormwater management system was not able to control all of the stormwater run-off which resulted in overflow conditions from the storage tanks and the collection sumps and vaults.

Based on discussions with FRO personnel that were on-site during the rainfall event and Golder's site inspection on December 4, 2014, the following general issues contributed to the stormwater management system discharging as noted above.

- A significant amount of fine compost material and sediment was washed into the sumps and vaults. This resulted in some clogging of the sumps and pump discharge lines.
- The pumps for the north vaults were reported by Recology to be pumping at rates of 100 gpm, which was well below the expected pumping capacity. This may have been due, in part, to clogging by sediment and/or compost fines.

n:\projects\ 2013\1301525 (rys cao workplans)\preliminary compost leachate evaluation memo.docx

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- The rate of flow into the receiving tanks was either greater than the rate that could be transferred to other tanks or the transfer piping became partially clogged. This resulted in overflow of the receiving tank and prevented utilization of all the existing on-site storage capacity.
- Additional storage capacity was required.

3.0 RECOMMENDATIONS FOR IMMEDIATE IMPROVEMENTS

The system performance needs to be improved in the following areas:

- Prevent clogging with fines and sediment
- Improve pumping capacity
- Increase storage

Details to address these issues are discussed below.

Prevent Clogging

- Placement of straw wattles at the toe of the compost and finished product piles during inclement weather. Golder observed a number of these wattles were already in place on December 4, 2014.
- During larger storm events (i.e. predicted to be greater than 0.75-inch per 24 hours), place straw wattles every 25 feet horizontally on the lower portion of the southeast portion of the compost operation area where previous sedimentation was deposited in the sump. The straw wattles should be oriented parallel to the topographic contour surface (i.e. not inclined along the slope).
- Maintain the wattles as appropriate by removing accumulated debris behind them following storm events.

Improve Pumping Capacity

- Inspect sumps and vaults and remove accumulated sediment and debris before and after each rainfall event
- Inspect pipes for potential clogging and clean as necessary
- Re-examine the pump operating curves for the installed pumps. If larger diameter discharge pipes are determined to be necessary to provide increased pumping capacity, install the larger diameter pipes

Increase Storage and Storage Performance

- Recology is mobilizing a total of 28 tanks on-site as a conservative measure until additional system analyses are completed
- Inspect tanks and interconnect piping to ensure there is no blockage and clean the tanks and pipes as appropriate

- Provide redundant storage tank interconnect piping to increase transfer capacity

- Route discharge piping through a valved pipe manifold structure that is capable of discharging water to different tanks if needed.

Evaluations should be continued to assess the performance of the routing of collected stormwater as more data is collected. Additionally, continued evaluation of stormwater run-off volumes should be completed as more data is collected to determine, if modification of the storage capacity is warranted.