
Central Valley Regional Water Quality Control Board

10 September 2014

Bryan Clarkson, Group Environmental Manager
Recology Hay Road
6426 Hay Road
Vacaville, CA 95687

NOTICE OF VIOLATION, 3 SEPTEMBER 2014 INSPECTION REPORT, RECOLOGY HAY ROAD, SOLANO COUNTY

Enclosed is an inspection report for the 3 September 2014 inspection at the Recology Hay Road landfill, which is regulated by the Water Board under Waste Discharge Requirements (WDRs) Order R5-2008-0188. The purpose of this focused inspection was to observe the condition of the drainage systems, landfill covers, and monitoring devices. The following violations and concerns shall be addressed:

Violations of the Order:

1. The Discharger places liquid from the pan lysimeters directly into the LCRS for storage. The discharge of liquid from a pan lysimeter into an LCRS is a violation of WDRs Construction Specification D6, which requires the LCRS to be maintained such that only "free draining" liquid is allowed in the sump. Therefore, the Discharger must cease the practice immediately.

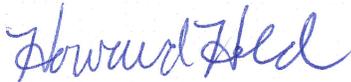
Areas of Concern

1. The cap, lock, and seal for monitoring well G-11 must be properly repaired to maintain the integrity of the well;
2. The leachate seep on DM 2.2 must be repaired immediately;
3. The interim covers must be enhanced to prevent exposure of waste on the slope as well as intrusion of rainwater;
4. The Discharger must evaluate how storm water will be managed during wet season operations in DM-1;
5. The Discharger must change its storm water sampling location for the Industrial Storm water Permit;
6. The sumps and drains for the compost area must be cleaned out and prepared for the forthcoming wet season;
7. The leachate seep and exposed waste in DM-2.2 must be addressed;
8. All existing drainage channels shall be cleared of vegetation; and
9. The discharge pipe for the "Big Pond" shall be capped.

Therefore, by **31 October 2014**, please submit a report, including photographs, which shows how the items identified above have been addressed.

Other areas of concern, including the insufficiency of the drainage collection systems (which is indicated by the presence of rills, gullies, and location of down spouts) and the transfer of liquids from the low-flow to the high-flow pond, are addressed in the Tentative Cease and Desist Order.

If you have questions, please contact me at mboyd@waterboards.ca.gov or (916) 464-4676.



HOWARD HOLD, P.G.
Senior Engineering Geologist
Compliance and Enforcement Section

Enclosure: Inspection Report
 Photographic Log

cc: Mayumi Okamoto, Office of Enforcement, State Water Board, Sacramento
 Dave Weiss, Solano Co. Environmental Health Services Division, Fairfield
 Tim Daleiden, Engineering Manager, Recology, Dixon
 Paul Yamamoto, Group Vice President, Recology, Dixon
 Greg Pryor, General Manager, Recology Hay Road, Vacaville
 Chris Tayler, Landfill Manager, Recology Hay Road, Vacaville

CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD

INSPECTION REPORT

10 September 2014

DISCHARGER: Recology Hay Road
LOCATION & COUNTY: 6426 Hay Road, Vacaville, Solano County
CONTACT(S): Bryan Clarkson, Group Environmental Manager, Recology
INSPECTION DATE: 3 September 2014
INSPECTED BY: Andrew Altevogt, Howard Hold, Mary Boyd, and Marty Hartzell with the Central Valley Regional Water Quality Control Board (Water Board)
ACCOMPANIED BY: Paul Yamamoto (Group Vice President, Recology), Bryan Clarkson Group Environmental Manager, Recology), Chris Taylor (landfill manager, Recology Hay Road), and Tim Daleiden (Engineering and Operations Manager, Recology)

Recology Hay Road (Discharger) is the owner and operator of the facility located approximately eight miles east of Vacaville on Hay Road. The Water Board regulates the Discharger under Waste Discharge Requirements R5-2008-0188, in part, for two Class III landfills, one Class II landfill, and composting operations. On 3 September 2014, Water Board staff performed a focused inspection to observe the condition of specific features, including selected landfill covers, drainage systems, and monitoring devices. Weather conditions were windy and warm, and site conditions were dry.

OBSERVATIONS AND COMMENTS: Water Board staff met with the Discharger's representatives at the facility office, where a copy of the 3 April 2014 topographic map was provided to staff. From the office, the inspection progressed to landfill disposal modules on the western side of the facility (DM-2.2, 2.1 and DM-1) and the borrow pit. The inspection then progressed to the eastern area of the facility where the southern side slopes of DM-3.3 and 3.2 were inspected. The inspection concluded with visual observations of a soil admixing area and a walk-through of the composting area. Areas of concern observed during the inspection are summarized below and in the attached photographic log.

Disposal Module 2.2, Downspouts and Interim Cover: The downspout configuration shown in Photograph 1 is typical for the facility. It appears that these downspouts do not discharge into a maintained runoff ditch, which may result in ponding of water at the toe of the slopes. This downspout configuration may be a contributing factor for the detection of liquids in pan lysimeters, which the Discharger has reported occurs after heavy rain events. In Photograph 2, it appears that a downspout terminated midway down the slope.

The interim cover at this module appears to be insufficient, as indicated by the exposed waste shown in Photograph 3. As shown in Photograph 12, there is an area under visqueen plastic, which the Discharger confirmed was a "leachate seep". Seeping leachate is a condition that suggests that the LCRS is backing up, or the interim cover is not sufficient to prevent percolation of rainfall, or both. Prior to the beginning of the wet season, 31 October, the Discharger must repair this slope.

Disposal Module 2.2A, Pan Lysimeter and Leachate Sump: Liquids detected in the pan lysimeter are pumped back into the leachate collection and recovery system (LCRS) instead of to the above ground holding tanks. Without specific approval in the WDRs, any discharge of pan lysimeter liquids to the LCRS is considered a violation of Construction Specification D6. The leachate storage tanks and access ports to the LCRS and pan lysimeter are shown in Photographs 5-7.

Approved: 

CIWQS Inspection ID: 17574624

Monitoring Well G-11, Condition: Groundwater monitoring well G-11 was unlocked and the expansion cap was not properly placed, as shown in Photographs 9 and 10.

Borrow Pit, Drainage Channel: As shown in Photograph 11, the drainage channel for the borrow pit appears to have a thick growth of vegetation and cattails. While vegetation can perform as a filtering mechanism to reduce suspended material, it can also reduce the channel capacity.

Exterior Slopes of DM 11.1/11.2: The inspection confirms that there are no runoff ditches installed to move water off this units slope. See Photograph 13.

DM-1 Winter Pad: As shown in Photograph 14, the Discharger is preparing the area on DM-1 for winter operations. The Discharger should include in their winterization plan a discussion of how stormwater will be managed for DM-1 winter operations.

Bird Sanctuary: As shown in Photograph 16, the Bird Sanctuary is a mitigated wetlands situated at the southeastern corner of the site. The Discharger informed us that storm water samples are collected from the discharge point of the pond. According to the industrial storm water permit, storm water samples must be collected at the edge of operations; therefore the sampling location must be changed such that storm water is sampled prior to discharge into the Bird Sanctuary.

Disposal Module 3.3, Bench and Side Slopes: As shown in Photograph 17, any runoff carried down the slope by the downspouts will discharge onto the road. Rain water has nowhere to move to, rather it ponds adjacent to the slope. The Discharger must enhance their runoff channels as outlined in the WDRs and Title 27. As constructed, this structure does not comply with Section 20365(a) which 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) for each class of waste management unit (Unit).*

As an example of the inadequate management of runoff, Photograph 18 shows the southern side slope of DM-3.3 had evidence of rills. In addition, just below the rills, a gully had formed, as shown in Photograph 19. The formation of rills and gullies is an indication of inadequate control of surface water runoff.

Food-Waste Composting Area: Leachate from the food waste composting area was observed to be draining across the surface and/or to drainage channels, which discharge to a central collection sump. Some channel drains appeared to be partially covered with compost material.

Photograph 22 shows the ponding of leachate on the concrete portion of the composting area. Also observed was debris within the sump. This may reduce the efficiency of the sumps which may result in ponding of water during a sizable rain event.

As shown in Photograph 26, one of four aerators in the low-flow pond was in operation at the time of the inspection, and the pond liquids appeared to be dark brown. The Discharger pumps liquids from the low-flow pond to the high-flow pond. Liquids in the high-flow pond appeared to have a yellowish tinge. Photograph 28 shows the pump and pipe used to remove liquid from the pond for dust control (a practice which does not comply with the WDRs).

An overflow drain in the high-flow pond is shown in Photograph 29. The system of pumping liquids from the low-flow pond to the high-flow pond does not comply with the WDRs.

SUMMARY: Water Board staff's observed areas of concern are summarized below:

Previously identified concern:

1. The down spout terminations should be reconfigured to prevent ponding at the toe of the slopes and to prevent intrusion of liquids through the covers and into the disposal units. The runoff collection/drainage system at DM-3.3 should be improved to prevent the formation of rills and gullies.
2. Liquids extracted from pan lysimeters may not be discharged back into a leachate collection and removal system
3. Pumping of liquids from the low-flow pond to the high-flow pond is not permitted by the WDRs. The discharge pipe from the "Big Pond" shall be capped.
4. Compost leachate is still used for dust control.

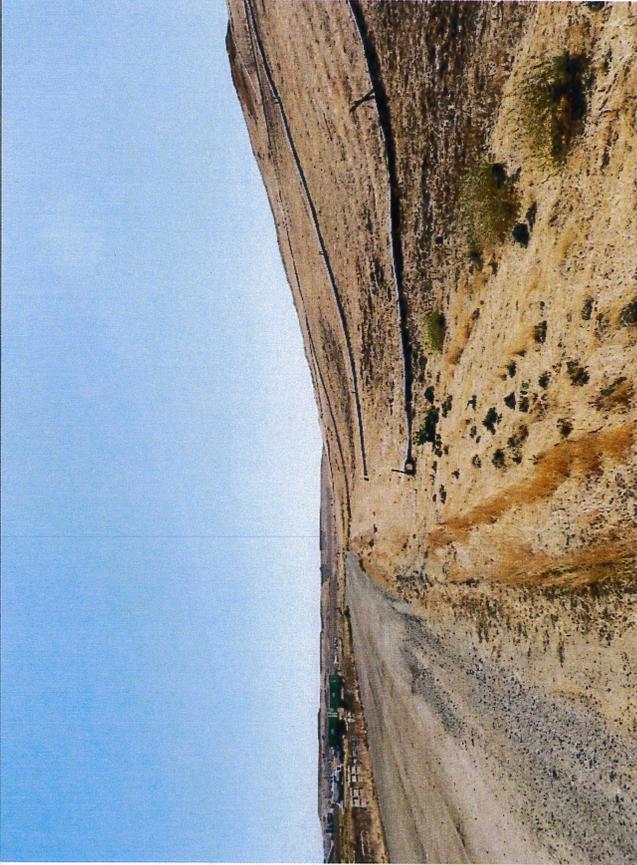
Newly Identified issues.

5. Monitoring well G-11 must be repaired so that it is capped and locked and so that the expansion cap is properly seated.
6. The capacity of the drainage channel behind the borrow pit shall be evaluated to determine if the vegetation has reduced the capacity with the threat of flooding.
7. The leachate seep observed on the south slope of DM 2.2 must be repaired.
8. The winterization plan must include a discussion about storm water management for DM-1.



Mary Boyd, P.E.

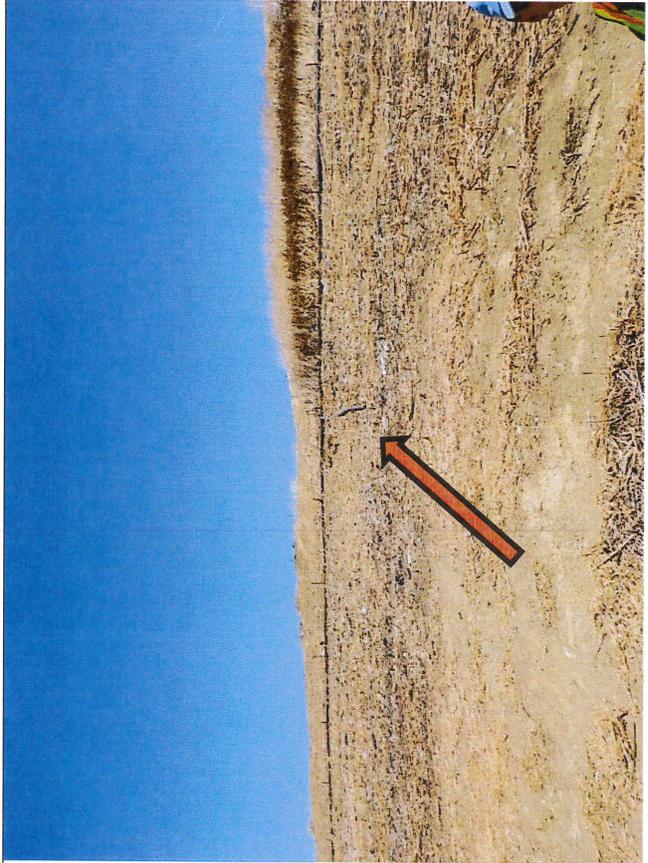
Attachments: Photographic Log 1 through 29 and video



Photograph 1

Looking east at the base of Disposal Module (DM) 2.2. This picture shows the downspouts designed to manage runoff from the slope. As constructed, this structure does not comply with Title 27 Section 20365(a) which 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) for each class of waste management unit (Unit).*

As shown in this photograph, there are no runoff ditches at the toe of the downspout. Rain water has nowhere to move to, rather it ponds adjacent to the slope. The Discharger must enhance their runoff channels as outlined in the WDRs and Title 27.



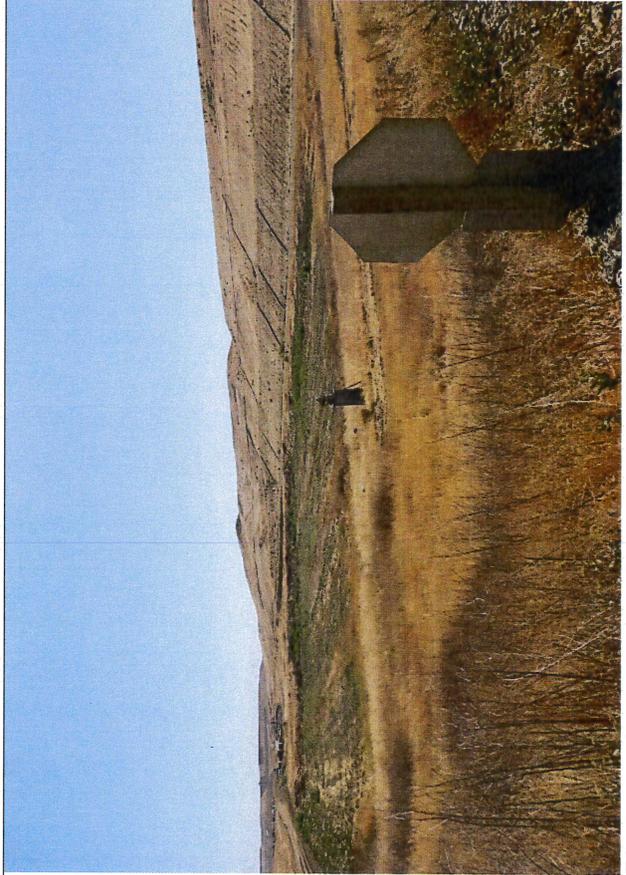
Photograph2

View looking up the southern side slope of DM-2.2, which shows a downspout terminating midway down the slope. In addition this slope needs to be prepared for the winter rains. Currently there is no control on this slope to prevent sheet flow of turbid water.



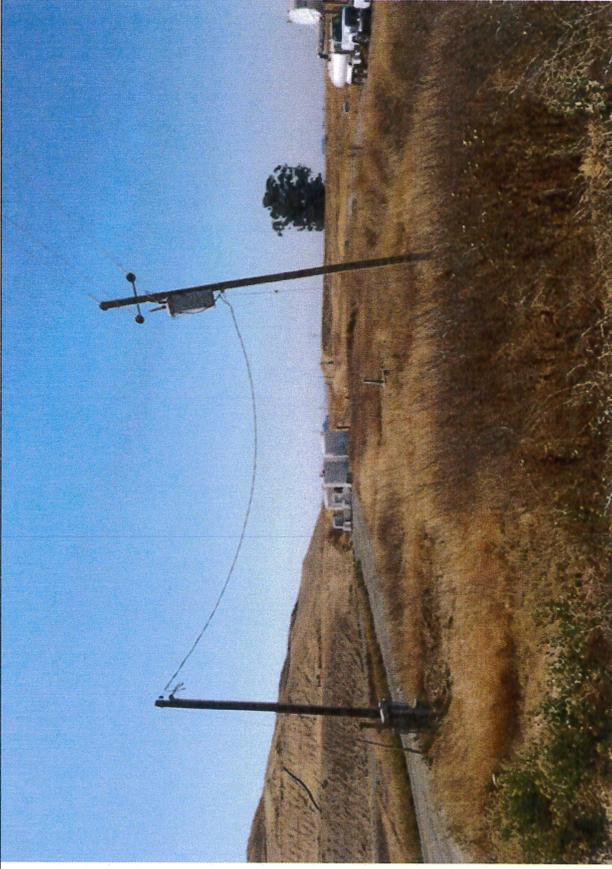
Photograph 3

View of the southern side slope at DM-2.2 showing exposed waste. The interim cover appears to be insufficient at this module.



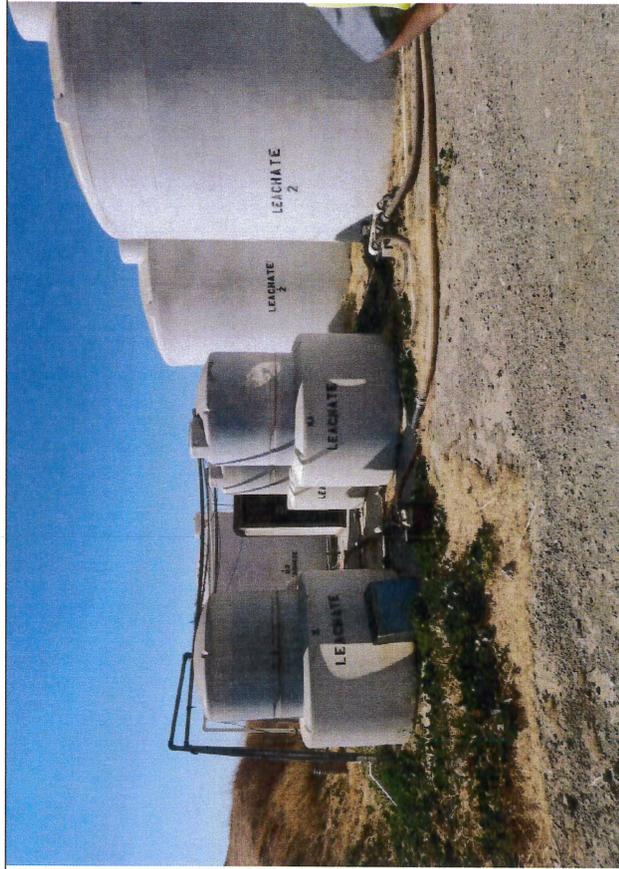
Photograph 4

Looking east at the "stormwater holding pond", which is located between DM-1 and DM-2.2. Also included in the photograph is the sump pump for the DM-1 sump, which was not operational. This was shut off after the groundwater basin was dug in the adjacent parcel.



Photograph 5

Looking south toward the Leachate Tank farm situated at the base of Module DM-2.2. Situated between the two power poles is the underground groundwater "slurry wall". Staff asked if there was any surveyed marker that could be observed in the field. The Discharger did not know of any benchmarks installed which identified the location of the slurry wall.



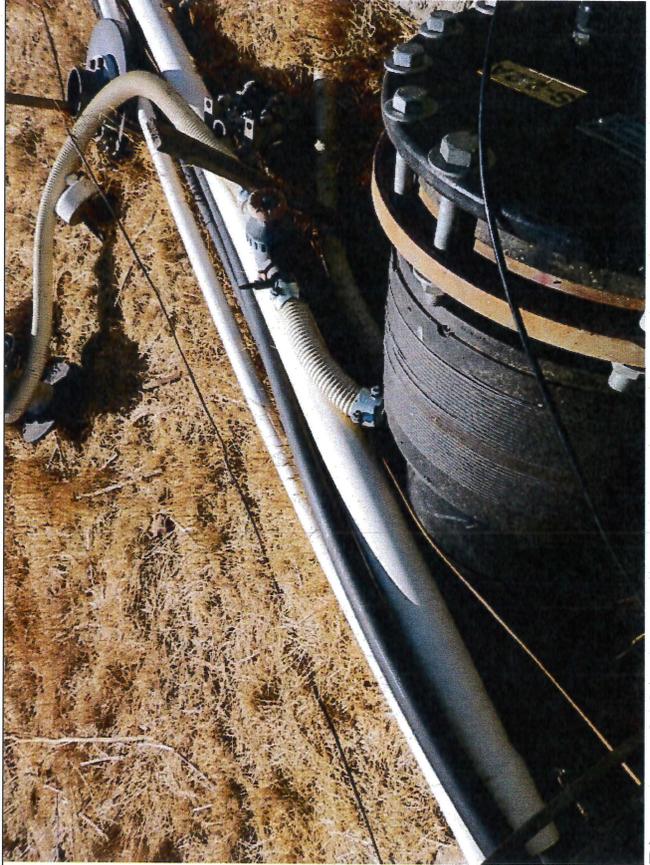
Photograph 6

Close up of the Leachate tanks. Liquid is removed from the tanks by a vacuum truck and shipped to the nearby wastewater treatment facility.



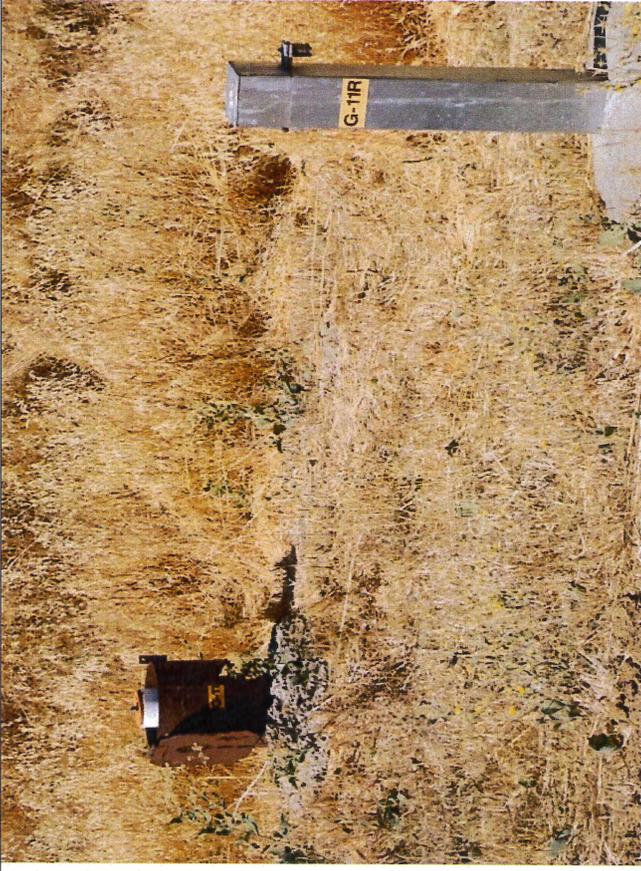
Photograph 7

Pictured here are sumps S-2.2A (Leachate sump) and the Pan Lysimeter PLS 2.2A. The leachate sump is the pipe on top. The clear flexible line branching off the side of the S-2.2A is the gas extraction system. The Discharger pumps water from the pan lysimeter into the LCRS sump rather than into an above ground tank. Discharge to the LCRS without approval in the WDRs is a violation of Construction Specification D.6.



Photograph 8

An up-close view of the gas lines and other piping associated with the landfill gas collection system.



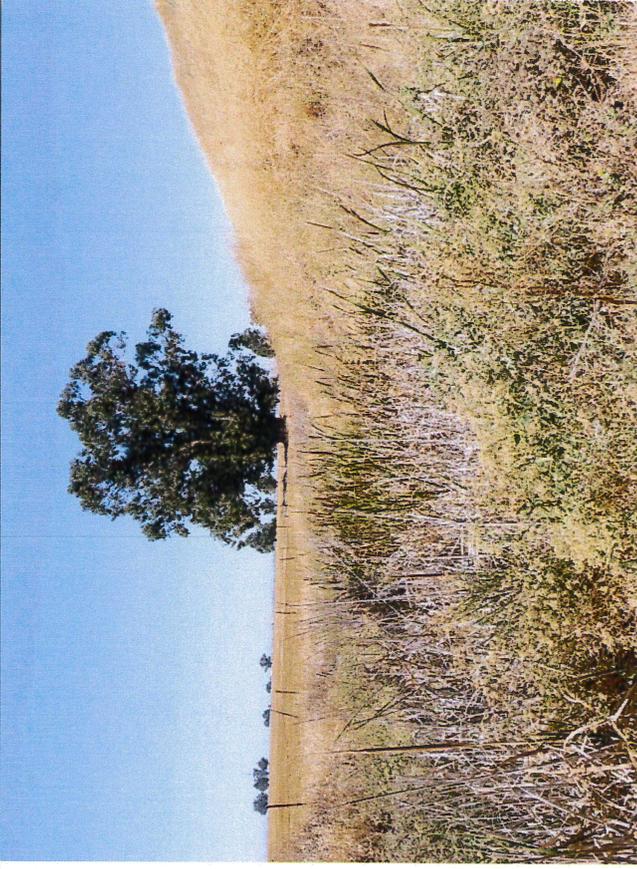
Photograph 9

Monitoring wells G-11 and G-11R are installed on the opposite side of the groundwater slurry wall from the landfill. Monitoring well G-11R was secured.



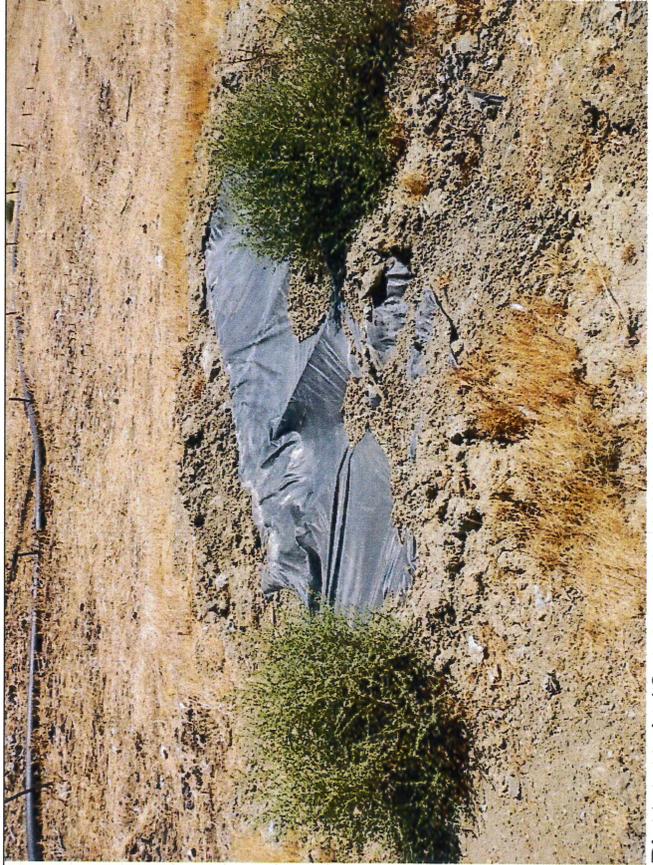
Photograph 10

Monitoring well G-11 is not locked and the well expansion cap is not properly placed on the well. This should be corrected immediately.



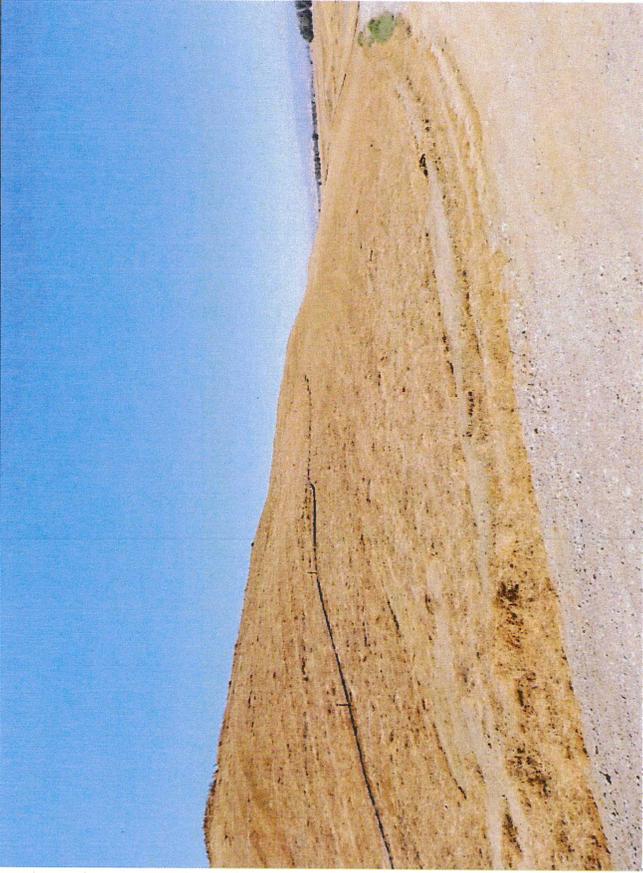
Photograph 11

View looking west at the discharge channel from the borrow pit. This portion of the channel is located on the south side of the borrow pit. Heavy growth of cattails and vegetation were observed during the inspection. Staff recommends that the Discharger determine whether the growth has reduced capacity, which could lead to flooding.



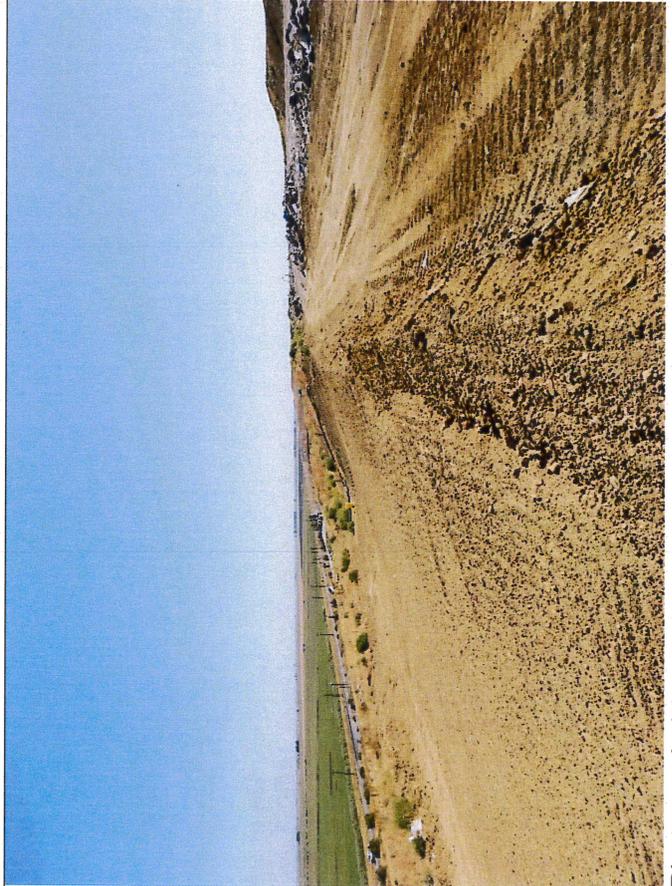
Photograph 12

At the base of Unit DM 2.2 there is an area under visqueen plastic. When staff asked the Discharger what this was, they responded a "leachate seep". It was unclear how long this area has been under plastic. The Discharger must address this in the forthcoming winterization plan.



Photograph 13

Looking west along the north face of DM-11. There are no runoff ditches installed to move water off this slope.



Photograph 14

This photo is looking east, along the DM-11. The Discharger is preparing the area for winter operations. Because this work is in progress, no downspouts have been installed.



Photograph 15

View from the south-east corner of DM-3.2 and over-looking the A-1 Channel and the bird sanctuary. The yellow arrow indicates the A-1 Channel and the red arrow indicates the bird sanctuary. The black arrow indicates a landfill gas PVC header pipe. The A-1 Channel crosses State Highway CA-113 at this location.



Photograph 16

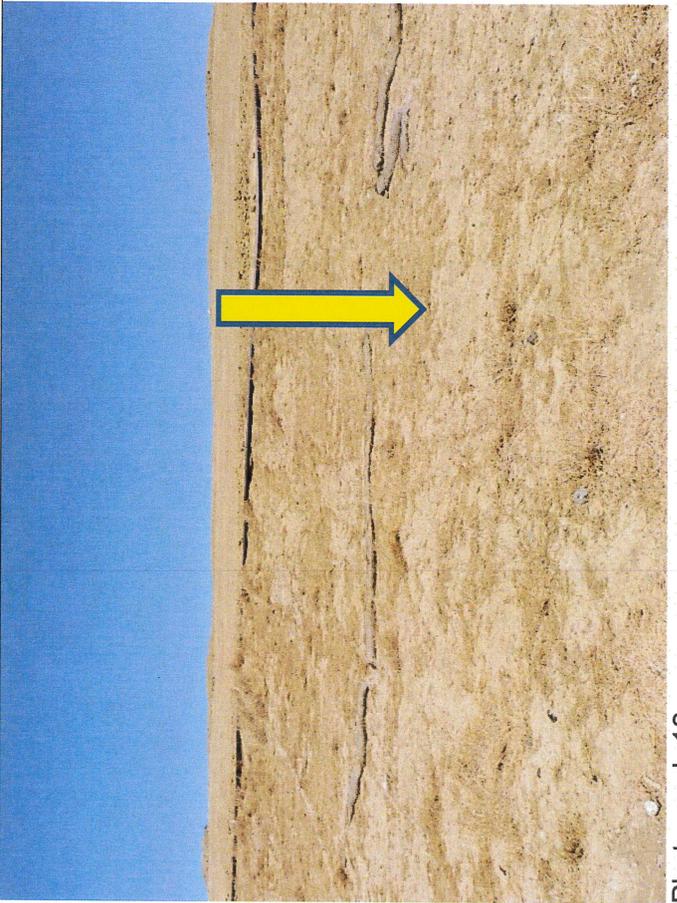
View of the bird sanctuary. View from the south side of DM-3.3 looking south over the bird sanctuary. Black arrow indicates the PVC header pipe for the landfill gas extraction system. The Discharger is sampling storm water after passing through the Bird Sanctuary. According to the storm water permit. The samples must be collected at the edge of operations; therefore the sampling location must be changed such that storm water is sampled prior to discharge into the Bird Sanctuary.

From the service road, looking east along the slope of Unit DM 3.3/3.2. Note that any runoff carried down the slope by the downspouts will discharge onto the road. Rain water has nowhere to move to, rather it ponds adjacent to the slope. The Discharger must enhance their runoff channels as outlined in the WDRs and Title 27. As shown in this photograph, there are no runoff ditches at the toe of the downspout.

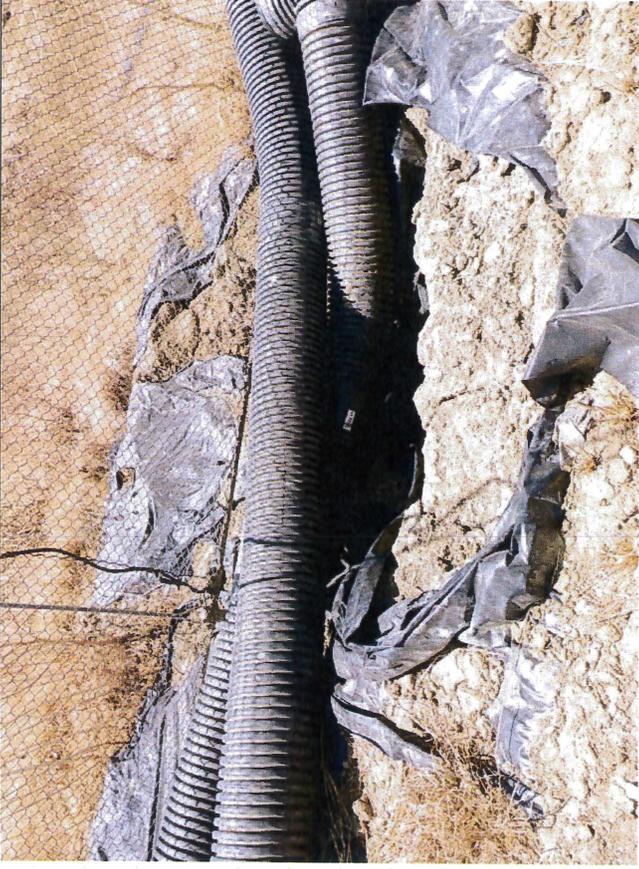


Photograph 17

Rill formation on DM-3.3. View from the south bench, looking up the slope. These slopes show evidence of rills, which form during runoff of rainwater. The rills are located up-slope from an erosion gully shown in the next photograph. Rill and gully formation are an indication of inadequate runoff controls.

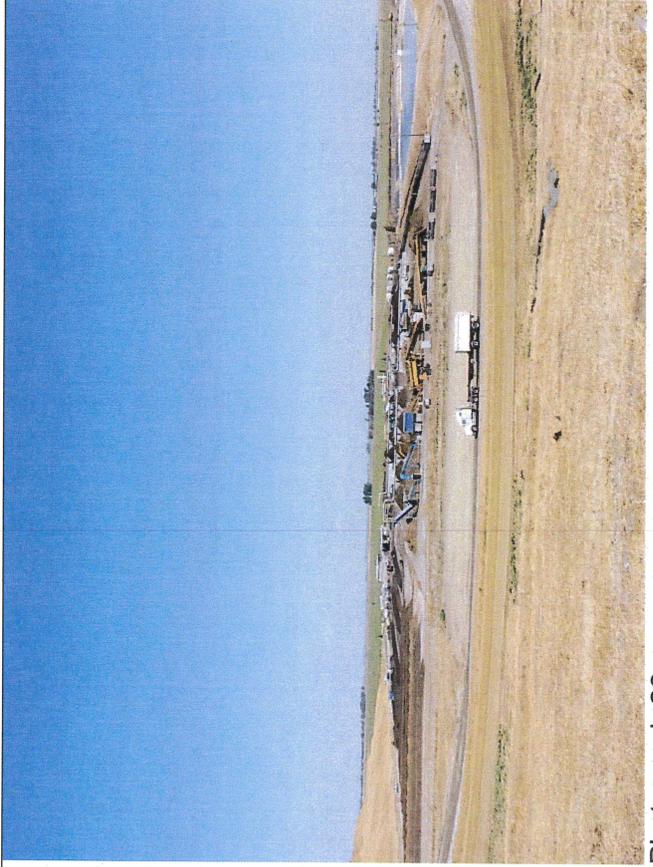


Photograph 18



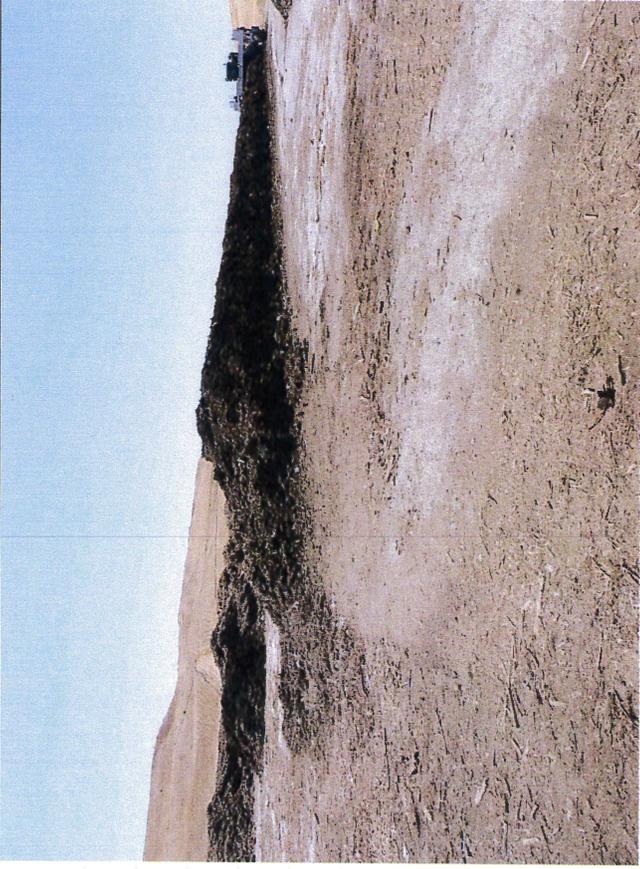
Photograph 19

View of plastic sheeting which is partially covering erosion at the bench of the DM-3.3 side slope. This gully may have been formed from ponding of runoff rainwater from the DM-3.3 side slope, which was likely followed by overtopping of the ponded area and the subsequent erosion and gully.



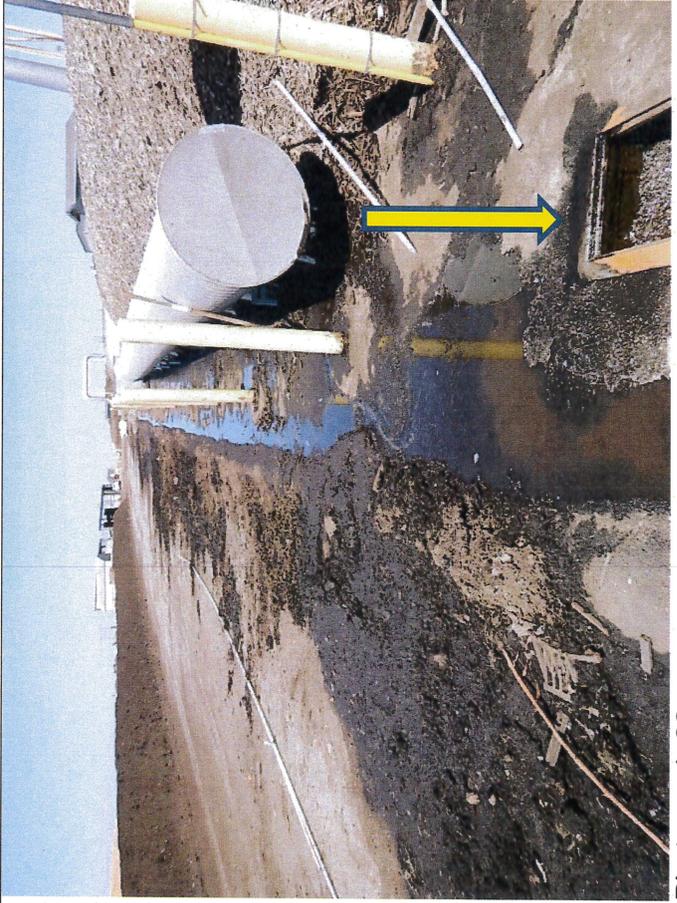
Photograph 20

Overview of the composting operations. This view shows the south side of the operations in the foreground. The "high-flow" pond is on the right side of the photo, and the green waste compost rows are shown on the left side.



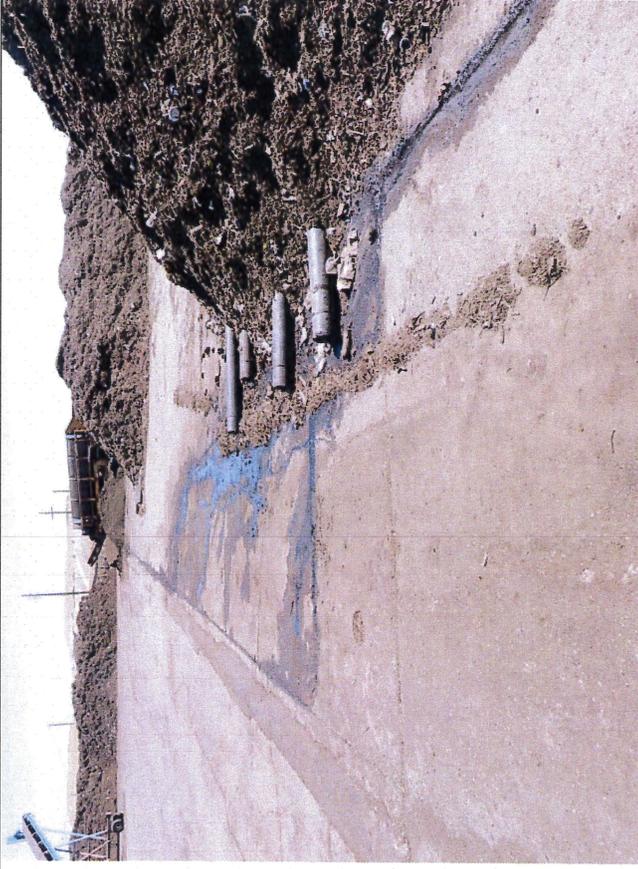
Photograph 21

View of green waste composting operations located on the western side of the compost area. Beneath the compost windrows is a compacted ground concrete material.



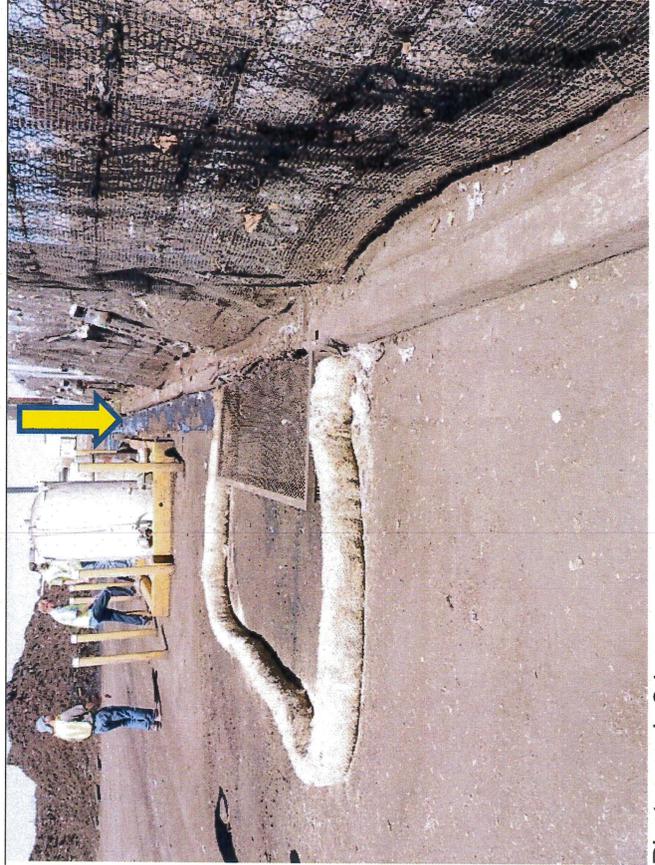
Photograph 22

Compost leachate generated during the composting process. The windrow to the right is covered under a "Bio-Filter". No "Ag-Bags" were in use at the time of the inspection. The arrow points to a collection sump. Note the debris in the sump that may reduce the efficiency of the sump.



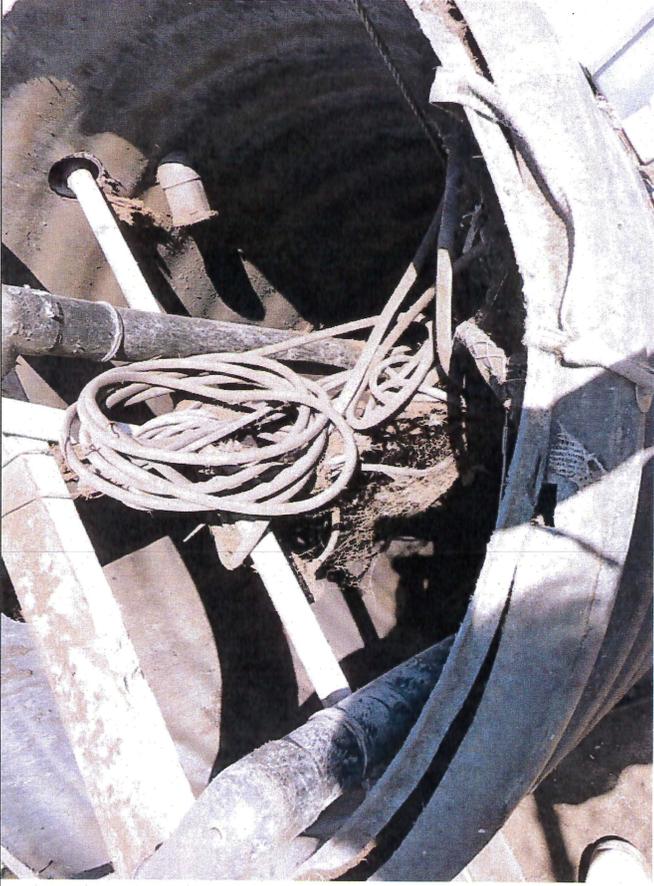
Photograph 23

View of food waste composting operations and leachate runoff. Leachate drains across the surface and through channel drains to a collection drainage ditch prior to discharge into the ponds. Currently, the facility is using a static pile system, which does not comply with WDRs requirement for an in-vessel system.



Photograph 24

View, looking north, of the food waste composting drainage ditch. Runoff flows along this drainage ditch to a sump and then is directed to either the low-flow pond or the high-flow pond. The arrow points at the curb where leachate is being directed to the sump.

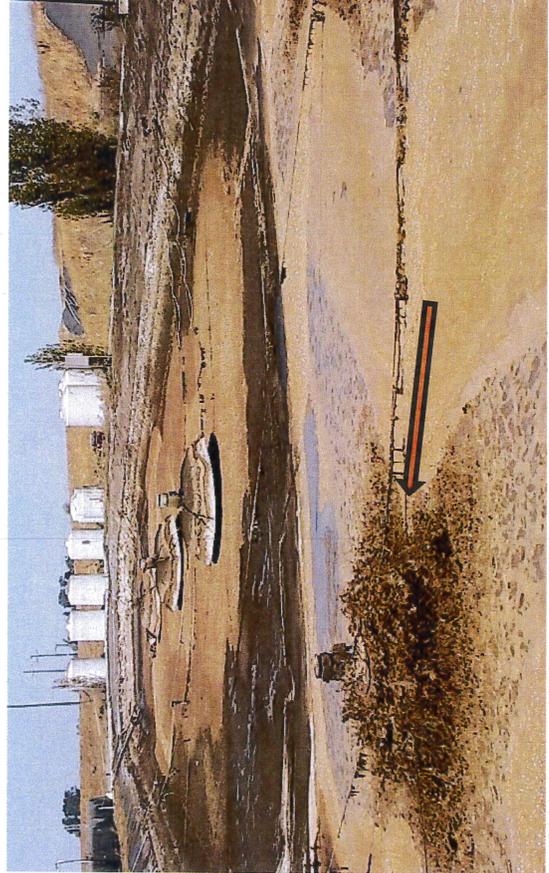


Photograph 25

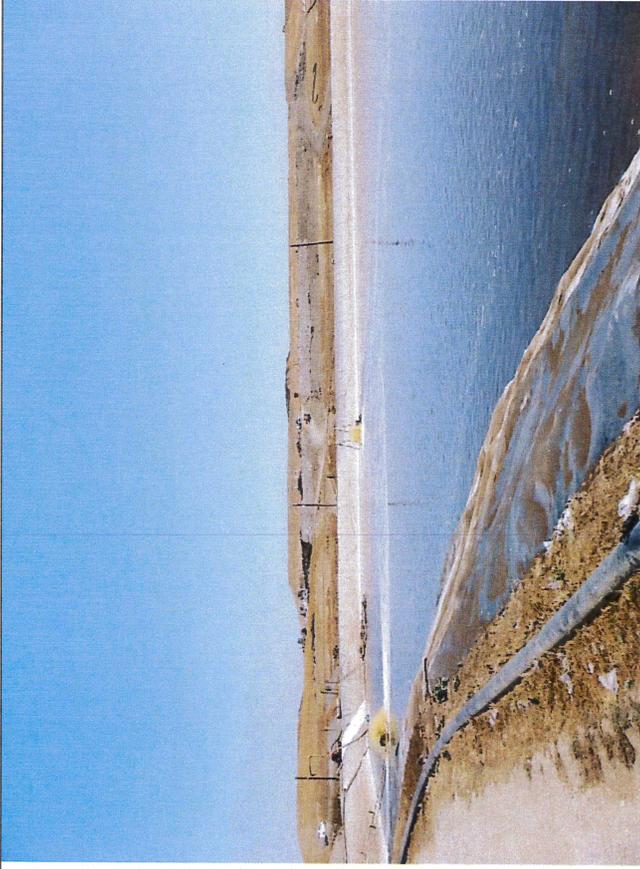
View of the collection sump for the food waste composting area.

View of the low-flow leachate pond for the food waste composting operations. The arrow points to a typical aerator for this pond, which the Discharger installed to mitigate odor problems associated with the pond. Liquids are pumped out of the pond to an adjacent high-flow pond. The process of pumping liquids out of the low-flow pond and over to the high-flow pond does not comply with the WDRs. Only one of four aerators was operating at the time of the inspection.

A video which shows this pond's aerators in operation will be included in the case file.

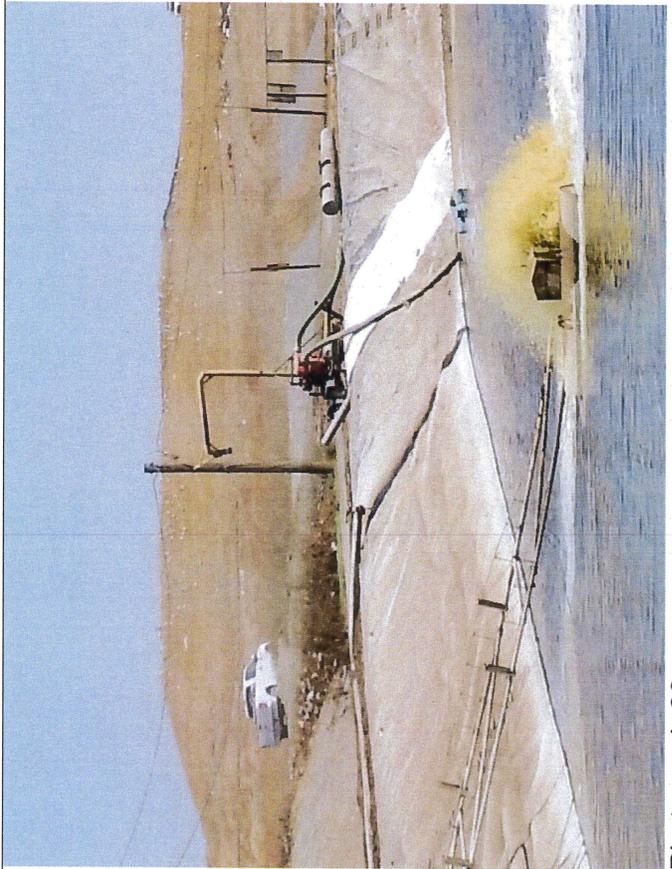


Photograph 26



Photograph 27

High-flow pond. View of the high-flow pond from the south-west side looking north. This pond contains leachate, which does not comply with the WDRs.



Photograph 28

A close up of the high-flow pond shows the pump and spout used to remove liquid from the pond for dust control. The photograph also shows a paddle wheel aerator in operation. There were three of five aerators operating at the time of the inspection.



Photograph 29

Overflow standpipe in the high-flow pond, which eventually discharges to off-site surface water drainage channels. Note the aerator in the upper right corner of the photograph.