



State of Oregon
Department of
Environmental
Quality

DEQ Solid Waste Program

LANDFILL INSPECTION REPORT

FACILITY:	Riverbend Landfill				
COUNTY:	Yamhill		PERMIT NO:	345	
INSPECTOR(S):	Bob Schwarz, Mark Riedel		INSPECTION DATE:	Thur, Jan. 8, 2015	
			Start time:	9:50 am	End time: 1:35 pm
Site Weather Conditions: Partly Sunny, 40s F					
Facility Representatives:		Jeff O'Leary, Jim Denson, Lee Brennan			
Inspection type:		Announced landfill inspection			
Facility Type:		MSW Landfill			

INSPECTION SUMMARY/KEY ITEMS:

This was a joint inspection by DEQ's stormwater permit writer (Mark Riedel) and solid waste permit writer (Bob Schwarz). Mark discussed factors that would be considered as they evaluate whether to rescind an enforcement notice for an exceedance of the allowable limit for zinc at Sampling Point 2.

Recent rains have caused erosion rills on the landfill north slope. To prevent release of contamination to the environment, all rain running off the landfill is being collected and treated as leachate.

Birds were seen in large numbers despite presence of falconer and falcons. DEQ noted that this may be due in part to the fact that the working face is larger than has been observed recently. WM noted that they are taking steps to reduce the size of the working face. This will be evaluated during the next inspection.

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
1.	Ownership. Facility ownership up to date?			x	
	Notes:				
2.	Waste Acceptance. Permittee accepts authorized waste only?			X	
3.	Special Waste Management. SWMP up to date?			X	
	Notes:				
4.	Prohibited Waste. Permittee accepts no prohibited waste? a) hazardous waste b) liquid wastes, lead acid batteries, used oil, vehicles, waste tires c) source separated recyclables d) asbestos e) infectious waste f) large metal jacketed appliances g) explosives			x	
	Notes:				
5.	Prohibited Waste Discovery. Permittee complies with prohibited waste discovery and reporting requirements?			X	
	Notes:				
6.	Open Burning. Does it occur?	x			
	Notes:				
7.	Operational Methods. Operations comply with approved operations plan?	X			
	Notes:				
8.	Operations Plan. Operations plan up-to-date and DEQ-approved?			X	
	Notes:				
9.	Permittee Self-Reporting. Permittee reports and corrects non-compliance conditions?	X			
	Notes:				
10.	Permit. Copy of Permit displayed and accessible to facility personnel?			X	
	Notes:				

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
11.	Visual Screening. Landfill screened from public view?	X			
	Notes: Landfill extends above the perimeter trees. In any event, landfill is visible from higher elevations, and is a significant issue for neighbors. However, this is not prohibited in permit.				
12.	Waste Unloading. Signs, fences, barriers clearly define waste unloading areas?	X			
	Notes:				
13.	Litter. Litter controlled and picked up?	X			
	Notes:				
14.	Vector control. Active landfill area has minimal birds, insects, rodents?				X
	Notes: Despite presence of falconer and falcons, a large number of birds were observed on the south side of the landfill. DEQ inspector noted that working face (exposed waste) is larger than has been observed recently, and that this could be a factor in the number of birds.				
15.	Air Quality, Noise. Dust, odors and noise controlled?	x			
	Significant quantity of mud on roads was not observed today. Dust was not observed.				
16.	Access. Entry roads are safe, provide all weather access and are well maintained?	x			
	Notes:				
17.	Entrance Signs. Entrance signs indicate facility name, emergency phone #, schedule, acceptable and prohibited wastes, and restrict site access?	x			
	Notes:				
18.	Public Access. Adequate security, prevents unauthorized entry and dumping?			X	
	Notes:				
19.	Cover Methods. Cover (including ADC) complies with DEQ- approved operations plan?			X	
	Notes:				
20.	Records. Permittee keeps records and reports of waste types and amounts of recyclables received and types reported to DEQ			X	
	Notes: Record provided electronically to DEQ.				
21.	Records retention. Permittee keeps all records for at least 5 years?			X	
	Notes:				

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
		In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
22.	Tire Storage. Permittee stores no more than 100 whole tires on site? No more than 2000 tires with continuous contract with removal contractor?	X			
	Notes:				
23.	Fire Protection. Permittee provides adequate on-site fire control measures? Has arranged for assistance from local Fire Department if needed?			X	
	Notes:				
24.	DEQ Fees. Permittee pays annual per-ton fees to DEQ?			X	
	Notes:				

II.	SITE DESIGN AND DEVELOPMENT	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
		In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
25.	Site Development. Landfill development meets DEQ-approved site development plan?	X			
	Notes:				
26.	Engineering Plans. Permittee submitted engineering plans for DEQ review and approval at least 6-months before constructing new cells, final closure features, environmental control systems or ancillary facilities?			x	
	Notes:				

III	FACILITY CONSTRUCTION	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
		In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
27.	Design Conformance. All landfill facility construction conforms to DEQ-approved plans and specifications?	x			
	Notes:				

III	FACILITY CONSTRUCTION	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
28.	Construction CQA. Facility Construction complies with DEQ-approved CQA plan?			X	
	Notes: Construction has been suspended for winter.				
29.	Construction Certification. Permittee submitted construction certification reports to DEQ for review and approval after constructing new facilities?			x	
	Notes:				
30.	New Approved Disposal Units. DEQ approved placement of waste in new cell?			X	
	Notes:				

IV	<u>LEACHATE MANAGEMENT</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
31.	Leachate Prevention. Permittee effectively minimizes leachate generation in active and inactive cells through systematic use of daily cover, intermediate (plastic) cover and phased final closure (close-as-you-go) strategies?				x
	Notes: Recent rains have caused erosion rills on landfill's north slope. This likely increases amount of liquid entering the landfill. In addition, stormwater reaching the stormwater ponds is being treated as leachate as a precaution. Repair of these rills will be done in late spring, when drier conditions make that possible.				
32.	Leachate Seeps. No leachate seeps present beyond lined cell footprints?	x			
	Notes:				
33.	Leachate collection system (LCS). Permittee maintains 1-foot or less hydraulic head in primary leachate collection system and continuously removes leachate from collection systems? All LCS systems and equipment in good condition and well maintained?			x	
	Notes: Daily sump level readings are provided quarterly. WM has installed a SCADA system to provide continuous monitoring of leachate levels. Some short-term exceedances have occurred, as WM has reported to DEQ.				

<u>IV</u>	<u>LEACHATE MANAGEMENT</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
34.	Leak Detection system (LDS). No leachate or other fluids detected in LDS? Permittee reports to DEQ any incidents of leakage through the primary liner system? LDS Systems well maintained?			X	
	Notes: This is documented in the annual report.				
35.	Leachate Storage/Treatment Ponds. Permittee maintains at least 3-feet of pond-dike freeboard above liquid surface? Access restricted by fencing and locked gates? Signs posted indicating pond contents and “no trespassing”? Ponds well maintained, structurally stable, no significant soil erosion, slope failures leaks or seeps? Odor control measures effective?	x			
	Notes: Leachate level in lagoon is higher than usual (roughly 5 feet below top), but below the 3-ft limit.				
36.	Leachate Treatment/Disposal. Leachate treatment methods comply with DEQ-approved leachate management plan? Existing facilities adequate or plans in development to address long-term leachate treatment and disposal? Treatment systems well maintained and functional?			x	
	Notes:				

<u>V</u>	<u>STORMWATER MANAGEMENT</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
37.	Stormwater Pollution Control Plan (SPCP). Up-to-date SPCP maintained in the Operating Record. Plan reflects site-specific conditions at the landfill?	x			
	Notes:				
38.	Stormwater Drainage Structures. Pipes, culverts, ditches, swales, berms, dikes, straw bales, erosion control matting, riprap, and other structures are well maintained, constructed per DEQ-approved design plans and specifications?	x			
	Notes:				
39.	Flood Control Structures. Perimeter flood control dikes are well maintained, structurally sound, in good condition?			X	
	Notes:				

<u>VI</u>	<u>LANDFILL GAS MANAGEMENT</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
40.	Landfill Gas Extraction System. Vertical wells and horizontal collectors are well maintained and sufficient in number to prevent excessive odors and subsurface gas migration? Header pipes, valves and associated equipment are functional and well maintained? Landfill-wide odors not excessive?			x	
	Notes:				
41.	Condensate Collection/Disposal. Condensate collection system well maintained, functional? Condensate sumps and storage tank(s) well maintained, no fluid leaks, odors not excessive? Permittee has records of condensate volumes and its chemical characteristics? Permittee routinely tests underground condensate sumps for subsurface leakage?			X	
	Notes:				
42.	Landfill Gas Blower/Flare station. Blower/flare station equipment functional and well maintained? Equipment installed reflects DEQ-approved design? No fluid leaks from condensate knockout tanks or other sources, no excessive odors?			X	
	Notes:				
43.	Equipment safety. Landfill gas system test equipment and ancillary structures are intrinsically safe (no confined spaces susceptible to landfill gas accumulation)?			X	
	Notes:				
44.	On-site, buildings offices. On-site structures setback adequately from the landfill or have engineering controls and monitoring to prevent and detect landfill gas intrusion and explosion hazards?			x	
	Notes:				
45.	Landfill Gas to Energy Facilities. Facilities are well maintained, no excessive odors, no fluid leaks from pipes or other equipment?			x	
	Notes:				

<u>VII</u>	<u>ENVIRONMENTAL MONITORING</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
46.	Groundwater Monitoring Program. Permittee conducts groundwater monitoring program in accordance with the DEQ-approved EMP? a) EMP updated to incorporate new or replacement monitoring wells? b) Site characterization reports for new disposal cells submitted for DEQ review and approval? c) Permit specific concentration limits established for the site? d) Annual Environmental Monitoring Reports (AEMR) submitted to DEQ on schedule?			x	
	Notes:				
47.	Groundwater Sampling Program. Sampling techniques comply with DEQ-approved EMP? a) DEQ notified at least 10 working days before scheduled sampling event? b) DEQ lab notified at least 45 days before split-sampling event? c) DEQ Lab split-sampling report supports permittee's results?			x	
	Notes:				
48.	Groundwater Monitoring Well Network. All DEQ-approved detection and compliance wells are properly constructed, functional, and well maintained? a) Well casings vertical, in good condition and stable? b) Concrete pads in good condition, sealed to casings, and stable? c) Well caps on and locked? d) Wells properly identified and labeled? e) Any evidence of surface water ponding or erosion around well locations? f) Any damage to wells? Was it reported appropriately to DEQ within 14 days? g) Any unused wells are properly decommissioned?			x	
	Notes:				
49.	Stormwater Monitoring Program. Established stormwater monitoring stations have identifiable field markings, and are maintained for repeat monitoring events per NPDES stormwater permit requirements and DEQ-approved EMP?			x	
	Notes:				
50.	Leak detection System. Access risers and collection sumps and pumps are functional and well maintained? No fluids present in the leak detection system? Permittee has reported to DEQ and investigated the source of any seepage into the leak detection system?			x	
	Notes:				

<u>VII</u>	<u>ENVIRONMENTAL MONITORING</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
51.	Surface Water Monitoring. Designated monitoring stations established and maintained for streams, ponds, lakes or other water bodies of interest per the DEQ-approved EMP?			x	
	Notes:				
52.	Landfill Gas Monitoring Program. Methane gas monitored in accordance with DEQ approved EMP? a) Monitoring results reported in AEMR and maintained in facility operating record? b) Probes are adequately placed and designed to monitor gas migration toward onsite and off-site structures and confined spaces? c) Permittee has inventoried susceptible confined spaces on and near the landfill, identified their locations on a site map, described their characteristics, and monitored for methane at these locations. d) Permittee monitors for landfill gas in liner leak detection system?			x	
	Notes:				
53.	Landfill Gas Monitoring Probes or Devices. All gas monitoring probes or sensors are properly constructed, labeled and maintained? a) Probes casings are vertical, in good condition, have locked security caps? b) Gas testing meter is properly calibrated before each monitoring event and maintained by manufacturer. c) Gas monitoring procedures conform to DEQ-approved EMP?			x	
	Notes:				

<u>VIII</u>	<u>LANDFILL CLOSURE</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
54.	Closure Process. Permittee has DEQ-approved closure plan and implements plan appropriately and effectively? Phased closure conforms to DEQ approved plans and schedule?			x	
	Notes:				

55.	Final Landfill Cover. Final cover system constructed in conformance with DEQ-approved plans and specs? a) Cover system in good condition and well maintained? b) Maintenance procedures consistent with DEQ approved O&M manual? c) Surface contours promote efficient drainage, prevent storm-water ponding?			X	
	Notes:				

<u>IX</u>	<u>FINANCIAL ASSURANCE</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
56.	Financial Assurance Plan. Has permittee updated the FA plan and documented the update in the facility operating record?			X	
	Notes:				
57.	Annual Certification. Has permittee submitted annual update certification to DEQ by the annual review date?			X	
	Notes:				
58.	Financial Assurance Expenditures. FA funds used only for closure, post-closure and corrective action?			X	
	Notes:				
59.	Continuous Financial Assurance. Permittee maintains continuous FA for the landfill?			X	
	Notes:				

Bob Schwarz

January 13, 2015

DEQ Representative_____
Date

PHOTOS



Waste and recyclables dropoff containers in the new front entrance facility.



Tanks for storing stormwater prior. Recent rains have caused erosion on the north side of the landfill. Stormwater coming off this slope is therefore being sent offsite for treatment and disposal in case of incidental contact with waste. Repairs to this slope will be conducted this spring, when site conditions are dry enough to allow such work.



Stormwater pond near NW corner of landfill. Outlet pipe is plugged so that stormwater is not released to the environment. As noted above, this water is assumed to be contaminated due to erosion of cover soil during recent rains.



Trucks leaving from scale house. In the distance, recently completed portion of the mechanically stabilized earthen berm (MSE berm) at the NW corner of the landfill.



Stormwater vault. This vault, near the front entrance facilities, has an oil/water separator for removing oil and grease from road runoff.



View of NW detention basin and outer face of MSE berm at its northern end.



View from top of landfill, looking SW. At right is the current work face, in module 9. Leachate lagoon is at left. Water level is higher than usual due to recent rain, and is approximately 5 feet below the top of the lagoon. (Maximum allowable elevation is 3 feet below top of lagoon). Waste Management is currently hauling approximately 250,000 gallons of leachate per day to offsite wastewater treatment plants.



View from top of landfill, looking west. Construction of Phase 1B of MSE berm is halted for the winter. Plastic sheet to cover soil has been disturbed by wind. Triangular area in background is the former northern poplar field that used to be irrigated with leachate. That area is currently used for soil processing and storage.



View of southern side of the landfill, looking northeast. A large number of birds were observed, despite the presence of falcons and falconer.



Stormwater basin near SW corner of landfill.