



DEQ Solid Waste Program

LANDFILL INSPECTION REPORT

FACILITY:	Riverbend Landfill				
COUNTY:	Yamhill		PERMIT NO:	345	
INSPECTOR(S):	Bob Schwarz		INSPECTION DATE:	Jan 28, 2014	
	Start time:	8:30 am	End time:	2 pm	
Site Weather Conditions: Cloudy, some rain, 40s (F)					
Facility Representatives:		Tim Watson, Jeff O'Leary, Larry Pierce			
Inspection type:	Unannounced landfill inspection				
Facility Type:	MSW Landfill				
INSPECTION SUMMARY/KEY ITEMS: Leachate seep. Leachate was observed trickling through stormwater diversion berm on north side of landfill. Some of this leachate crossed the perimeter road along the northern edge of the landfill and flowed down to the grassy area north of the landfill. Odors. Odors were much reduced from my last visit, when waste on the north side of the landfill was still being moved to allow construction of the north access road. Gary Andes met me at the site around noon. We drove through different parts of the community to check for odors. We did not smell any at any location. Roadside litter. In light of recent complaints about roadside litter, I again monitored litter quantities along highway 18, beginning 13 miles north of landfill. Litter was seen periodically all along the highway. At approx 6 miles north of the landfill, two people were picking up litter. Right near the landfill, another litter crew (hired by the landfill) was doing the same. Amount of roadside litter near the landfill was high. Gas flare. Landfill personnel report that enclosed flare is running normally. Gas detectors/alarms. I checked that all buildings that should have methane detectors/alarms have them. These buildings are: main office, scale house, engine building. Office and scale house each have one; the engine building has eight.					

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: No operational problems noted.				
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: Some litter was observed on the road, though the amount of litter along this portion of the road is similar to what I found elsewhere in the vicinity. I will continue to monitor for litter on the highway near the landfill.				
14.	Vector control. Active landfill area has minimal birds, insects, rodents?	x			
	Notes:				
15.	Air Quality, Noise. Dust, odors and noise controlled?	x			
	Notes: Odors were much reduced from my last visit, when waste on the north side of the landfill was still being moved to allow construction of the north access road. Gary Andes met me at the site around noon. We drove through different parts of the community to check for odors. We did not smell any at any location.				
16.	Access. Entry roads are safe, provide all weather access and are well maintained?	x			
	Notes: Raining is increasing the amount of mud on the paved areas near the office.				
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.				

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
21.	Records retention. Permittee keeps all records for at least 5 years?			X	
	Notes:				
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
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
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:				
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	LEACHATE MANAGEMENT	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: Leachate seeps observed along north side of landfill (Module 8)				
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.				
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 evaluated in the annual report.				

<u>IV</u>	<u>LEACHATE MANAGEMENT</u>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
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:				
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: Mud from trucks is cleaned using a sweeper on landfill roads. A contractor sweeps Highway 18 twice daily.				
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: Wattles along Highway 18 have been replaced and supplemented with gravel check dams. These appear to be more effective at catching sediment.				
39.	Flood Control Structures. Perimeter flood control dikes are well maintained, structurally sound, in good condition?			X	
	Notes:				

VI	<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: Office building, scale house and engine building all should have landfill gas sensors/alarms. Office and scale house each have one. Engine building has eight.				
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 29, 2014

DEQ Representative

Date

PHOTOS



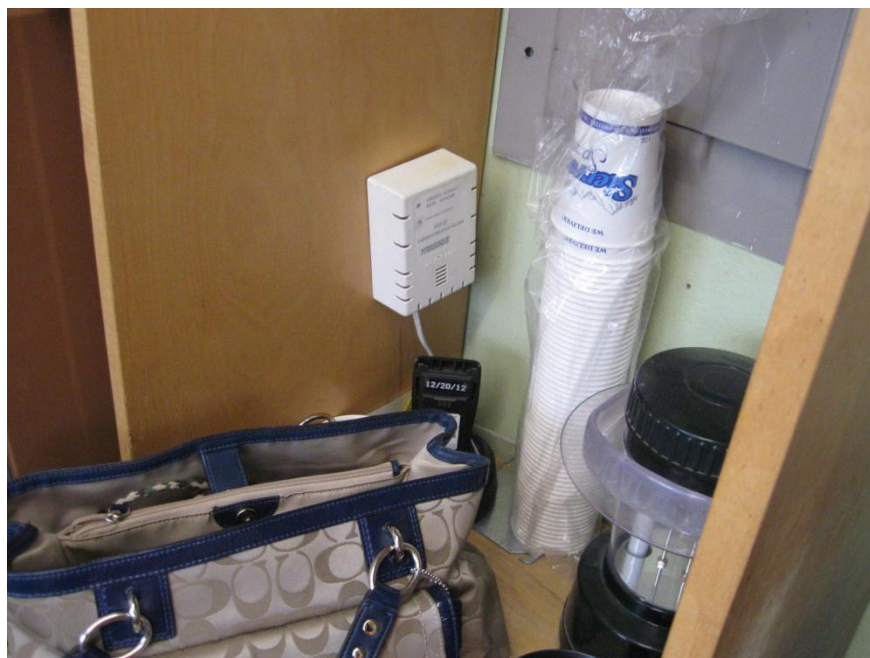
1. New stormwater wattles and gravel check dams in swale along Highway 18.



2. New stormwater wattles and gravel check dams in swale along Highway 18.



3. Landfill gas detection/alarm in conference room in main office.



4. Landfill gas detection/alarm in scale house.



5. Landfill gas detection/alarm in engine building.



6. View of north slope, following completion of waste relocation for construction of north access road.



7. View of north slope, following completion of waste relocation for construction of north access road.
Foreground: the three 21,000-gallon tanks for landfill gas condensate and related leachate.



8. Wheel wash for removing mud from trucks and tires before trucks leave the site.



9. Wheel wash for removing mud from trucks and tires before trucks leave the site.



10. Smooth drum roller compacting granular soil for exterior portion of the mechanically stabilized earthen (MSE) berm. In midground: rolls of uniaxial geogrid used to reinforce this soil.



11. Unloading granular soil for reinforced fill zone of MSE berm.



Leachate weeping through stormwater diversion berm near northern edge of landfill.



Ponded water, containing leachate, along northern road around landfill (looking east). In midground, this liquid is running across the road and into the grassy area to north of the landfill.



Leachate ponding on interior side of stormwater swale.