



State of Oregon  
Department of  
Environmental  
Quality

DEQ Solid Waste Program

**LANDFILL INSPECTION CHECKLIST**

<b>FACILITY:</b>	Riverbend Landfill		
<b>COUNTY:</b>	Yamhill	<b>PERMIT NO:</b>	345
<b>INSPECTOR(S):</b>	Bob Schwarz	<b>INSPECTION DATE:</b>	Feb. 10, 2016
	<b>Start time:</b>	9:20 am	<b>End time:</b> 12:45 pm
<b>Site Weather Conditions:</b> Cloudy, 40s F			
<b>Facility Representatives:</b>	Tim Watson, Jeff O'Leary		
<b>Inspection type:</b>	Announced (joint inspection with DEQ stormwater permit writers)		
<b>Facility Type:</b>	MSW Landfill		

**INSPECTION SUMMARY:**

This was a joint inspection with DEQ's stormwater program, which was represented by Mark Riedel and Jill Seale. Jill is taking over for Mark at this site. Key observations:

**Odors.** Odors were more noticeable on the landfill property, including near the site entrance. I also traveled to several locations along and near Hwy 18. I did not notice odors off the property.

**Road cleanliness.** Some mud was observed on the paved roads within the facility. Highway 18 had a small amount of mud on the road. A sweeper truck was on the Hwy 18 northbound acceleration lane most of the time of our inspection. We observed wattles placed parallel to the ditch that runs along the east side of Hwy 18, at the edge of the roadway. This appears to be capturing silt and preventing it from entering the ditch. However, it therefore remains on the road. Because the ditch is equipped with other wattles to prevent migration of this silt (photos 2 through 4 below), DEQ and Waste Management discussed removing these.

**Litter.** No significant amount of litter was observed on the highway, and stray litter was not seen on the landfill property.

**Stormwater on north side of landfill.** For much of 2015, Waste Management had been diverting stormwater from the north side of the landfill to the leachate pond, because vegetated cover on this side of landfill was not adequate to demonstrate separation of stormwater from potentially contaminated stormwater. Since December 2015, they have been managing all stormwater as uncontaminated and discharging it to the sedimentation pond.

**Active working face.** We discussed the fact that the current working face is very close to the facility entrance and is larger than the working face during previous recent inspections.

**Birds.** The number of birds was considerably higher than last year at this time, despite the presence of the falconer. This is another reason to make the working face as small as possible.

**Runoff from working face.** Runoff from uncovered waste at the working face comes close to the stormwater ditch that runs along the top of the MSE berm, although no contaminated water was seen in this ditch. We recommend some measures, such as digging a ditch along the inner edge of the top of the MSE berm, to ensure that contaminated water does not reach the drainage ditch on top of this berm.

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
1.	<b>Ownership.</b> Facility ownership up to date?			x	
	Notes:				
2.	<b>Waste Acceptance.</b> Permittee accepts authorized waste only?	x			
	Notes:				
3.	<b>Special Waste Management.</b> SWMP up to date?			x	
	Notes:				

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
4.	<b>Prohibited Waste.</b> 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.	<b>Prohibited Waste Discovery.</b> Permittee complies with prohibited waste discovery and reporting requirements?	x			
Notes:					
6.	<b>Open Burning.</b> Does it occur?	x			
Notes:					
7.	<b>Operational Methods.</b> Operations comply with approved operations plan?	x			
Notes:					
8.	<b>Operations Plan.</b> Operations plan up-to-date and DEQ-approved?			x	
Notes:					
9.	<b>Permittee Self-Reporting.</b> Permittee reports and corrects non-compliance conditions?	x			
Notes:					
10.	<b>Permit.</b> Copy of Permit displayed and accessible to facility personnel?			x	
Notes:					
11.	<b>Visual Screening.</b> Landfill screened from public view?				x
Notes: Current waste disposal operations are near the entrance to the site and are therefore more visible than usual. During next inspection, evaluate site of working face and visibility.					
12.	<b>Waste Unloading.</b> Signs, fences, barriers clearly define waste unloading areas?	x			
Notes:					
13.	<b>Litter.</b> Litter controlled and picked up?	x			
Notes:					

I.	OPERATIONS	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
14.	<b>Vector control.</b> Active landfill area has minimal birds, insects, rodents?				x
Notes: As noted above, there is a large number of birds during this and the Nov 2015 inspection. Efforts to reduce the size of the working face are necessary.					
15.	<b>Air Quality, Noise.</b> Dust, odors and noise controlled?				x
Notes: There is a minor amount of mud on the road. I observed traffic flow to see if vehicles kicked up dust on the highway near the landfill. I did not see dust. Odors were more noticeable on the property, perhaps due to the size and current location of the working face.					
16.	<b>Access.</b> Entry roads are safe, provide all weather access and are well maintained?	X			
Notes:					
17.	<b>Entrance Signs.</b> Entrance signs indicate facility name, emergency phone #, schedule, acceptable and prohibited wastes, and restrict site access?	X			
Notes:					
18.	<b>Public Access.</b> Adequate security, prevents unauthorized entry and dumping?	X			
Notes:					
19.	<b>Cover Methods.</b> Cover (including ADC) complies with DEQ- approved operations plan?	X			
Notes:					
20.	<b>Records.</b> Permittee keeps records and reports of waste types and amounts of recyclables received and types reported to DEQ			x	
Notes:					
21.	<b>Records retention.</b> Permittee keeps all records for at least 5 years?			x	
Notes:					
22.	<b>Tire Storage.</b> Permittee stores no more than 100 whole tires on site? No more than 2000 tires with continuous contract with removal contractor?	X			
Notes: See photo 6.					
23.	<b>Fire Protection.</b> Permittee provides adequate on-site fire control measures? Has arranged for assistance from local Fire Department if needed?			x	
Notes:					

I.	<b>OPERATIONS</b>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
24.	<b>DEQ Fees.</b> Permittee pays annual per-ton fees to DEQ?			x	
Notes:					

II.	<b>SITE DESIGN AND DEVELOPMENT</b>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
25.	<b>Site Development.</b> Landfill development meets DEQ-approved site development plan?			x	
Notes:					
26.	<b>Engineering Plans.</b> 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	<b>FACILITY CONSTRUCTION</b>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
27.	<b>Design Conformance.</b> All landfill facility construction conforms to DEQ-approved plans and specifications?			x	
Notes: no construction ongoing					
28.	<b>Construction CQA.</b> Facility Construction complies with DEQ-approved CQA plan?			x	
Notes: no construction ongoing					
29.	<b>Construction Certification.</b> Permittee submitted construction certification reports to DEQ for review and approval after constructing new facilities?			x	
Notes: no construction ongoing					

III	<b>FACILITY CONSTRUCTION</b>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
30.	<b>New Approved Disposal Units.</b> DEQ approved placement of waste in new cell?			x	
Notes: no construction ongoing					

IV	<b><u>LEACHATE MANAGEMENT</u></b>	In Compliance	Not in Compliance	N/A for this Inspection	Follow-up required
31.	<b>Leachate Prevention.</b> 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: Smaller working face recommended.					
32.	<b>Leachate Seeps.</b> No leachate seeps present beyond lined cell footprints?	x			
Notes:					
33.	<b>Leachate collection system (LCS).</b> 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: WM provides this information quarterly.					
34.	<b>Leak Detection system (LDS).</b> 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: Fluid quantities in leak detection system are reported annually.					
35.	<b>Leachate Storage/Treatment Ponds.</b> 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:					

<b><u>IV</u></b>	<b><u>LEACHATE MANAGEMENT</u></b>	<b>In</b> Compliance	<b>Not in</b> Compliance	N/A for this Inspection	Follow-up required
36.	<b>Leachate Treatment/Disposal.</b> 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: leachate is not treated onsite.					

<b><u>V</u></b>	<b><u>STORMWATER MANAGEMENT</u></b>	<b>In</b> Compliance	<b>Not in</b> Compliance	N/A for this Inspection	Follow-up required
37.	<b>Stormwater Pollution Control Plan (SPCP).</b> Up-to-date SPCP maintained in the Operating Record. Plan reflects site-specific conditions at the landfill?				
Notes: Stormwater permit writers took part in this inspection. This topic will be covered in their inspection report.					
38.	<b>Stormwater Drainage Structures.</b> 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?				
Notes:					
39.	<b>Flood Control Structures.</b> Perimeter flood control dikes are well maintained, structurally sound, in good condition?				X
Notes: Some soil sloughing remains an issue on the north side of the landfill. Two areas were repaired. The area between those two areas began sloughing in the last two weeks.					

<b><u>VI</u></b>	<b><u>LANDFILL GAS MANAGEMENT</u></b>	<b>In</b> Compliance	<b>Not in</b> Compliance	N/A for this Inspection	Follow-up required
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<b>VI</b>	<b><u>LANDFILL GAS MANAGEMENT</u></b>	<b>In</b> Compliance	<b>Not in</b> Compliance	<b>N/A for this</b> Inspection	<b>Follow-up</b> required
40.	<b>Landfill Gas Extraction System.</b> 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: Odors were stronger than during past inspections. This may be due to a larger working face than seen during previous recent inspections. Landfill staff report that the gas management system is operating normally. They did note that recently installed wells are drawing gas from newer waste, which has a higher sulfur content.					
41.	<b>Condensate Collection/Disposal.</b> 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.	<b>Landfill Gas Blower/Flare station.</b> 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.	<b>Equipment safety.</b> Landfill gas system test equipment and ancillary structures are intrinsically safe (no confined spaces susceptible to landfill gas accumulation)?			x	
Notes:					
44.	<b>On-site, buildings offices.</b> 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.	<b>Landfill Gas to Energy Facilities.</b> Facilities are well maintained, no excessive odors, no fluid leaks from pipes or other equipment?	x			
Notes:					

<b><u>VII</u></b>	<b><u>ENVIRONMENTAL MONITORING</u></b>	<b>In Compliance</b>	<b>Not in Compliance</b>	<b>N/A for this Inspection</b>	<b>Follow-up required</b>
46.	<b>Groundwater Monitoring Program.</b> 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.	<b>Groundwater Sampling Program.</b> 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.	<b>Groundwater Monitoring Well Network.</b> 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.	<b>Stormwater Monitoring Program.</b> Established stormwater monitoring stations have identifiable field markings, and are maintained for repeat monitoring events per NPDES stormwater permit requirements and DEQ-approved EMP?				
Notes: This will be covered in inspection report being prepared by stormwater inspectors.					
50.	<b>Leak detection System.</b> 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:					

<b><u>VII</u></b>	<b><u>ENVIRONMENTAL MONITORING</u></b>	<b>In</b> Compliance	<b>Not in</b> Compliance	N/A for this Inspection	Follow-up required
51.	<b>Surface Water Monitoring.</b> Designated monitoring stations established and maintained for streams, ponds, lakes or other water bodies of interest per the DEQ-approved EMP?	x			
Notes:					
52.	<b>Landfill Gas Monitoring Program.</b> 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: This will be evaluated during review of the annual report.					
53.	<b>Landfill Gas Monitoring Probes or Devices.</b> 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:					

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

55.	<b>Final Landfill Cover.</b> 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:					

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

Bob Schwarz

Feb. 12, 2016

\_\_\_\_\_  
**DEQ Representative Signature**

\_\_\_\_\_  
**Date**

**Photo Log:**



1. View looking south: office yard in foreground, public waste/recyclable drop off area at left, working face at rear.



2. Highway 18, looking north. Wattles (mulch-filled mesh tubes to capture sediment) run along the drainage ditch perpendicular to flow. Some others were recently placed along the side of the road.



3. Highway 19, looking south. Photo was taken as cars pass, to assess whether dust is kicked up from road. No dust was noted. Some staining of the road was observed.



4. Hwy 18, looking north. Sweeper is seen in acceleration lane. Wattles parallel to road are trapping sediment along the edge of the road.



5. Entrance road, looking south.



6. Recyclables containers: electronics (left), tires (right).



7. N. end of MSE berm. Drain pipes convey water from within the berm. Active face is shown in rear.



8. N. end of MSE berm. Manholes provide access to piping that conveys stormwater from sedimentation basin 1A to future stormwater detention pond 2.



9. View of active working face from N. end of MSE berm.



10. View of stormwater detention pond 2, from NW corner of landfill.



11. Leachate pond. Freeboard was approx. 5.5 feet (minimum allowable is 3 feet).



12. Outfall 2, which drains stormwater detention pond 1 (south of landfill).



13. Upgradient end of stormwater detention pond 1.



14. NE side of landfill.



15. Outfall 4. Water was flowing clear.



16. Eastern of two areas where soil sloughing was repaired. (North side of landfill.) A rip rap buttress is visible at the bottom of the slope.



17. Western of two areas where soil sloughing was repaired.



18. Soil sloughing was recently observed in the area between the two repaired areas.



19. Another view of the recent soil sloughing.



20. View of working face from top of landfill.

**Site Location:**

Three miles SW of McMinnville in Yamhill County, on Highway 18.