



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		INSPECTION DATE:	Apr. 30, 2014	
	Start time:	8:30 am	End time:	Noon	
Site Weather Conditions: Sunny, low 80s F					
Facility Representatives:		Tim Watson			
Inspection type:	Announced landfill inspection				
Facility Type:	MSW Landfill				
INSPECTION SUMMARY/KEY ITEMS: Erosion and sediment controls. Acceleration lane on Hwy 18 is being cleaned four times/day. Highway itself is cleaned as needed, according to landfill personnel. This is done between 1-3 am. MSE berm. Work continues. No problems noted. Reinforced fill material (granular soil) and clay (amended with cement) for the berm's inner slope are being placed. Soil sloughing on north side of landfill. As noted in photos below, soil is sloughing on perimeter berm on landfill's north side. Geosyntec is working to address this problem.					

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: I observed 10-15 bags outside the tall litter fence on the north and east sides of the landfill. WM personnel collected these at my request. The tall litter fence placed there had several very large holes during my previous inspection. These have been repaired.				
14.	Vector control. Active landfill area has minimal birds, insects, rodents?	X			
	Notes:				
15.	Air Quality, Noise. Dust, odors and noise controlled?	X			
	Odors. I did not observe odors off the property.				
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
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	<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:				
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:				
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:				

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:				
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

April 30, 2014

DEQ Representative

Date

PHOTOS



Road cleanliness. At 8:30 am, dirt on road was causing vehicles to raise dust clouds. Sweep Rite comes to the site at approximately 9 am, 1 pm, 4 pm and late at night. Road was inspected again at 9:45 am after the first sweeping of the day. Conditions were greatly improved.



Erosion control features in swale along landfill side of Hwy 18. Mulch bags are staked into ground. Jute mesh lines the swale. Mulch bags are above, gravel check dams are beneath.



Downstream end of jute mesh, where swale leads to creek. Outlet is filled with gravel and a steel pipe, the end of which is covered by geotextile to filter sediment out of discharging water.



View of NW slope of the landfill. WM plans to add additional soil on this area to complete the 18" intermediate cover



Soil sloughing on north slope. Geosyntec will submit plans by June to repair this area. The repair work will be done in late summer, when conditions are driest.



Soil sloughing area. Also shown is vac truck removing stormwater from base of slope, to reduce potential for further sloughing.



Close up view of area with sloughing soil.



Drain pipe installed during cell construction. These are contributing to sloughing problem, and will be evaluated by Geosyntec.



Tall litter fence on NE side of landfill. Some plastic litter was observed outside the fence. Holes in fence noted during April 8 inspection have been repaired.



View of working face on top of landfill.



View of MSE berm, looking west from south side of landfill.



Building the south end of the MSE berm.



Building the south end of the MSE berm.



Clay stockpile for MSE berm. Clay is blended with cement at 5 percent to dry it and increase its strength. In the lower, wider berm lifts, clay is placed and then blended with cement. In these upper berm lifts, which are narrower, the clay is blended with cement away from the berm and then the clay/cement mixture is hauled to the berm for compaction.



Placing and spreading granular soil in the reinforced fill zone (outer half of the MSE berm).



Placing and spreading granular soil in the reinforced fill zone.



View of the MSE berm's inner, clay slope, from the top of the berm.



View of leachate storage pond. Liquid level is higher than usual due to heavy spring rains. Freeboard is approximately 8 feet (minimum allowable is 3 feet).



View of MSE berm exterior face. Welded wire cages are placed along the outside of each 18-inch lift to hold topsoil until vegetation is established. The exterior will be hydroseeded after the berm construction is complete.



MSE berm exterior face.



MSE berm exterior face.



Poplars west of landfill.



Stormwater retention basin for the front entrance area.



Stormwater retention basin for the front entrance area.