



State of Oregon
Department of
Environmental
Quality

DEQ Solid Waste Program

LANDFILL INSPECTION CHECKLIST

FACILITY:	Riverbend Landfill		
COUNTY:	Yamhill	PERMIT NO:	345
INSPECTOR(S):	Bob Schwarz	INSPECTION DATE:	Fri, June 6, 2014
	Start time:	9:30 am	End time: 1 pm
Site Weather Conditions: Sunny, temperature range: 70-80 F			
Facility Representatives:	Jeff O'Leary, Tim Watson		
Inspection type:	Announced		
Facility Type:	MSW Landfill		
<u>INSPECTION SUMMARY:</u>			
Inspection included review of MSE berm construction, and general site 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			x
	Notes: Waste intake forms included items listed as special waste. I have requested additional information from Jeff O'Leary.				
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?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				
13. Litter. Litter controlled and picked up?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes: Some plastic bags seen on NE corner of landfill. Landfill personnel subsequently picked these up.				
14. Vector control. Active landfill area has minimal birds, insects, rodents?	X	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes: Number of birds was considerably less than previous visits (bird population seems to be highest in late fall.) Falconer was on site. However, seasonal variation seems to be a key factor.				
15. Air Quality, Noise. Dust, odors and noise controlled?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				
16. Access. Entry roads are safe, provide all weather access and are well maintained?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes: Amount of mud on roads has improved. At DEQ's request, WM has been providing photo documentation daily. They also clean acceleration lane twice/day, and landfill roads several times throughout the day.				
17. Entrance Signs. Entrance signs indicate facility name, emergency phone #, schedule, acceptable and prohibited wastes, and restrict site access?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				
18. Public Access. Adequate security, prevents unauthorized entry and dumping?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				
19. Cover Methods. Cover (including ADC) complies with DEQ- approved operations plan?	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				
20. Records. Permittee keeps records and reports of waste types and amounts of recyclables received and types reported to DEQ	x	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Notes:				

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: See photo 19. Number of tires on site is less than 100.				
23.	Fire Protection. Permittee provides adequate on-site fire control measures? Has arranged for assistance from local Fire Department if needed?	x			
	Notes: WM works with local fire department (arrangement described more fully in 3-25-2013 email from Frank Willman (WM) to Bob Schwarz (DEQ).				
24.	DEQ Fees. Permittee pays annual per-ton fees to DEQ?			X	
	Notes: This is handled by DEQ HQ.				

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:				
28.	Construction CQA. Facility Construction complies with DEQ-approved CQA plan?	x			
	Notes: This will be evaluated further during review of construction completion documents.				
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: None were observed during my site inspection. However, WM reported a leachate release on June 9. Work to address that is underway.				
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: This will be verified with quarterly spreadsheet of daily leachate head readings.				

<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:					
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			
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: Stormwater ponds are being cleaned and reseeded as part of ongoing construction.					
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: Odors not observed off the property.					
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?				
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:					

DEQ Representative Signature

Date

Photo Log:



1-Truck wash facility



2-Inner slope of MSE berm



3-Inner slope of MSE berm



4-View of new cell enclosed by MSE berm. Man lifts are used to allow workers to smooth surface of berm slope prior to liner installation. Also shown is the depression for the leachate sump.



5-Worker on manlift



6-Former north poplar field. This area is now used for soil stockpiling.



7-Former north poplar field.



8-Former north poplar field.



9-Outer face of MSE berm.



10-Drain pipe on outer face of MSE berm.
(These are spaced every 100 feet.)



11-Stormwater pond near SW corner of landfill. Vegetation was cleaned out of the pond.



12-NE slope of landfill. Some blowing plastic litter was observed.



13-View from top of MSE berm of workers in man lift smoothing surface of inside slope of berm.



14-View of same man lift from top of berm farther north.



15-Constructing cell floor inside MSE berm.



16-Topsoil stockpile inside former north poplar

field area.



17-View of leachate pond from landfill working face.



18-View of MSE berm from landfill working face.



19-Tire storage.



DEQ

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LANDFILL INSPECTION REPORT

FACILITY:	Riverbend Landfill		
COUNTY:	Yamhill	PERMIT NO:	345
INSPECTOR(S):	Bob Schwarz	INSPECTION DATE:	Tues, July 1, 2014
	Start time:	8:30 am	End time: 11:30 am
Site Weather Conditions: Sunny, 80s F			
Facility Representatives:	Tim Watson		
Inspection type:	Unannounced landfill inspection		
Facility Type:	MSW Landfill		
INSPECTION SUMMARY/KEY ITEMS:			
<p>MSE berm phase 1A is largely complete. Liner system is being installed. Excavation has begun for phase 1B.</p> <p>On June 10, Waste Management reported a leachate release on the north side of the landfill. I inspected the location of the release (photos below). WM stated that the liquid was mostly rain water but, based on dark color and slight leachate odor, they suspected it contained some leachate. Because this portion of the landfill is lined and capped, it is not clear how leachate could have escaped at this location. WM has sent a sample of this liquid to the lab for chemical analysis.</p> <p>Construction continues on the front entrance facilities (photos below).</p>			

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

July 10, 2014

DEQ Representative

Date

PHOTOS



Concrete forms for scale at new scale house, part of the new front entrance facilities.



Formwork for concrete for waste drop-off area.



Excavation for foundation of MSE berm Phase 1B, north end of berm.



Excavated soil where liquid was discovered on June 9. Waste Management had reported this as a leachate release consisting mostly of rain water with some leachate. We are awaiting lab results to determine if the liquid does include leachate.



Additional view of area where liquid had collected. This was pumped out and underlying soil was excavated and disposed of in the landfill.



Liner and cap geomembrane were exposed to evaluate whether leaking liquid includes leachate and, if so, how it is escaping.



Former north poplar field, now used for soil stockpiling.



Former north poplar field, now used for soil stockpiling.



View of inside slope of MSE berm, Phase 1A.



Liner installation on inside slope of MSE berm Phase 1A. The liner includes six layers of geosynthetics. From top down, these are:

- 16 oz/SY nonwoven geotextile protective layer
- Primary geomembrane
- GCL (geosynthetic clay liner)
- Composite drainage net layer
- Secondary geomembrane
- Protective geotextile



Installing geotextile.



Preparing surface of cell within MSE berm prior to installation of liner system.



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:	Sept 25, 2014
	Start time:	10:30 am	End time: 1 pm
Site Weather Conditions: Cloudy, temperatures in 60s and 70s 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. Paved areas within landfill property are swept and washed continuously using a tractor-mounted roller brush. Truck wash is out of service; it will soon be relocated to an area uphill of new scale house. Some mud and gravel trackout onto Highway was observed despite cleaning efforts.

MSE berm. Phase 1-A is completed. Phase 1-B construction is underway and is scheduled to be completed by end of 2014.

Tie-in of liners for Modules 1 and 8. Waste Management (WM) has uncovered the edges of Module 1 overliner and Module 8 liner in preparation for connecting them with additional liner material.

Front entrance facility. Construction continues, as shown in attached photos.

Gas wells. New gas wells are being installed. Photos are included below.

Leachate seep on north slope. Stained water is being collected near the edge of the north slope. Testing by Waste Management indicated this may be contaminated surface water from recent construction vehicles on the north slope. As indicated in the photos, some of this liquid is quite dark, and looks like leachate. Geosyntec is preparing a report evaluating this issue and recommending solutions. In the meantime, this liquid is being collected near the landfill cap/liner anchor trench and pumped into the leachate collection system.

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: WM recently submitted an updated SWMP. DEQ is currently reviewing.				
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: Falcons were working today. However, a large number of birds were at the site. Based on past years' observations, fall seems to be when bird numbers are highest.					
15.	Air Quality, Noise. Dust, odors and noise controlled?	X			
Notes: I did not observe odors off the property. It rained during the inspection so 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
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: Construction quality assurance documents for MSE berm Phase 1-A were submitted in September. DEQ reviewed and approved them on 9/24/2014.					
29.	Construction Certification. Permittee submitted construction certification reports to DEQ for review and approval after constructing new facilities?	x			
Notes: see preceding item.					
30.	New Approved Disposal Units. DEQ approved placement of waste in new cell?	X			
Notes: Disposal in new module 9 (MSE berm Phase 1-A) approved by letter on 9-24-2014.					

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: Some seeps are being collected near anchor trench on north slope. The source is unclear because this area is capped. Geosyntec is evaluating and will submit a report with recommendations for correcting this problem. Leachate was not observed outside the landfill footprint.					
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.					

<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:					
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: I observed construction of one of 26 new gas wells. (See photos.) Vapors from the excavation are pumped to a 55-gallon drum of activated carbon to filter out odorous gases. The excavated waste is sprayed with an odor neutralizing chemical in an attempt to minimize odors. There were odors near this well construction. I did not notice odors off the landfill property.					
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

DEQ Representative

Sept. 26, 2014

Date

PHOTOS



Recently poured slab for front entrance facility. Customers will dump waste and recyclables from upper level into containers on lower level.



View of lower-level floor from upper level. A drainage channel runs along the length of the lower floor. Liquid to the right of this channel is conveyed to the leachate collection system. Liquid to the left of the channel flows into a stormwater inlet.



Northern edge of Phase 1-B MSE berm, where it tapers down to the ground surface.



View of MSE berm looking south, from the Phase 1-B portion now under construction.



View of Module 9 disposal cell from top of MSE berm. In the distance is an area where liner will be installed to connect the overliner of Module 1 with the liner of Module 8. The curving geotextile holds the drainage line that leads to the Module 9 sump.



View of inside slope of the Phase 1-A MSE berm. Leachate riser pipes run up the slope and convey leachate to the transmission line that runs to the leachate storage pond.



View of Module 9, looking northwest.



View of southern end of Module 9. The unlined portion of the MSE berm is outside the waste disposal area, and serves to slope down to existing grade.



View of the area where the Module 1 overliner will be connected to the Module 8 liner with new liner material. The area is currently covered with liner material to keep it dry prior to installation of the new liner section.



View of stormwater pond near the southwest corner of the landfill.



Area where contaminated water is collecting on the north slope. Waste Management's consultant is evaluating how to address this issue.



Drainage channel in the area where stained water was observed.



A second low spot where stormwater/leachate are collected and pumped into the leachate collection system.



Recently installed landfill gas well.



Drill rig installing new landfill gas well.



View of landfill's west side, from top of landfill. The leachate storage pond is in the background; and Module 9 is on the right, midground.



Augur bucket used to drill landfill gas well.



Vapors from landfill gas well excavation are pumped into a 55-gallon drum filled with activated carbon. This is done to reduce odors leaving the site during gas well construction.



Stormwater check dams in ditch along landfill side of Highway 18.



View of Highway 18 to show road cleanliness. Some mud and gravel were observed on the highway despite continuous sweeping/washing of roads within the landfill complex and sweeping/washing of the highway acceleration lane 4 times per day. The truck wash station is currently not operating because it is being relocations near the new scale house.