



State of Oregon
Department of
Environmental
Quality

Permit Number: 259
Expiration Date: Feb. 26, 2026
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SOLID WASTE DISPOSAL SITE CLOSURE PERMIT
Municipal Solid Waste Landfill

Southwest Landfill

Oregon Department of Environmental Quality
400 E Scenic Drive, Suite 307
The Dalles, OR 97058
Telephone: 541-298-7255

Issued in accordance with the provisions of ORS Chapter 459 and
subject to the land use compatibility statement referenced below.

ISSUED TO:

Deschutes County
Department of Solid Waste
61050 SE 27th Street
Bend, OR 97702
541-317-3163

FACILITY NAME AND LOCATION:

Southwest Landfill
54580 Highway 97
La Pine, OR 97739

OWNER:

Deschutes County
Department of Solid Waste
61050 SE 27th Street
Bend, OR 97702
541-317-3163

OPERATOR:


Deschutes County
Department of Solid Waste
Chad.centola@deschutes.org
541-317-3163

ISSUED IN RESPONSE TO:

- a solid waste closure permit renewal application received on December 19, 2014.

The determination to issue this permit is based on findings and technical information included in the permit record.

ISSUED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY



Elizabeth Druback
Solid Waste Manager
Eastern Region

2/26/2016

Date

Permitted Activities

Until this permit expires or is modified or revoked, the permittee is authorized to operate and maintain a closed solid waste land disposal site in conformance with the requirements, limitations, and conditions set forth in this document including all attachments.

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PERMIT ADMINISTRATION

1.0 PERMIT ISSUANCE

1.1 In this section: This section describes the administrative aspects of permit issuance, including the following information:

- Permittee
- Permit number
- Permit term
- Facility type
- Facility owner/operator
- Basis for permit issuance
- Definitions
- Legal control of property

1.2 Permittee

This permit is issued to the **Deschutes County**.

1.3 Permit number

This permit will be referred to as Solid Waste Permit Number 259.

1.4 Permit term

The permit is issued on the date it is signed. The permit's expiration date is Feb. 26, 2026.

1.5 Facility type

The facility is permitted as a closed municipal solid waste landfill.

1.6 Facility owner/ operator

The owner of this facility is: Deschutes County Department of Solid Waste.

The operator of this facility is: Deschutes County Department of Solid Waste.

1.7 Basis for permit issuance

This permit is issued based upon the following documents submitted by the permittee:

- Solid waste permit application received on December 19, 2014.

1.8 Definitions

Unless otherwise specified, all terms are as defined in OAR 340-093-0030.

1.9 Legal control of property

The permittee must at all times maintain legal control of the disposal site property; including maintaining a current permit, contract or agreement that allows the operation of the facility if the site or a portion of the site is not owned by the permittee.

2.0 DISCLAIMERS

2.1 In this section: This section describes disclaimer information for DEQ, including:

- Property rights
- DEQ liability

2.2 Property rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights.

2.3 DEQ liability

DEQ, its officers, agents, or employees do not sustain any liability on account of the issuance of this permit or on account of the construction, maintenance, or operation of facilities pursuant to this permit.

3.0 AUTHORITY

3.1 In this section: This section describes the authority of DEQ to issue this permit, including:

- Ten-year permit
- Documents superseded
- Permittee responsibility and liability
- Other compliance
- Penalties
- DEQ access to disposal site

3.2 Ten-year permit

This permit is issued for up to 10 years as authorized by Oregon Revised Statutes 459.245 (2).

3.3 Documents superseded

This document is the primary solid waste permit for the facility, superseding all other solid waste permits issued for the Southwest Landfill by DEQ.

3.4 Permittee responsibility and liability

Conditions of this permit are binding upon the permittee. The permittee must conduct all facility activities in compliance with the provisions of this permit. The permittee is liable for all acts and omissions of the permittee's contractors and agents in carrying out the operations and other responsibilities pursuant to this permit.

3.5 Other compliance

This permit's issuance does not relieve the permittee from the responsibility to comply with all other applicable federal, state, or local laws or regulations, including the following requirements, and any future updates or additions to these requirements:

- Solid waste renewal permit application received December 19, 2014;
- Oregon Revised Statutes, Chapters 459 and 459A;
- Oregon Administrative Rules Chapter 340; and
- Any documents submitted by the permittee and approved by DEQ Oregon Revised Statutes,

3.6 Penalties

Violation of permit conditions will subject the permittee to civil penalties of up to \$25,000 for each day of each violation [ORS 459.995(1)(a)].

3.7 DEQ access to disposal site

The permittee must allow representatives of DEQ access to the disposal facility at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit. Reference: OAR 340-093-0050(6)

4.0 PERMIT MODIFICATION

4.1 In this section: This section describes the process for modifying this permit, including:

- Permit review
- Permit modification
- Modification and revocation by DEQ
- Modification by permittee
- Public participation
- Changes in ownership or address

4.2 Permit review

During the permit's term, DEQ may review and amend the permit if necessary. DEQ will consider the following factors in making this determination:

- Compliance history of the facility
- Changes in volume, waste composition, or operations at the facility
- Changes in state or federal rules which should be incorporated into the permit
- A significant release of leachate or landfill gas from the facility to the environment
- A significant change to DEQ-approved site post-closure plan, and/or environmental monitoring plan
- Other significant information or events

4.3 Permit modification

DEQ or the permittee may, at any time during the permit's term, propose to change the permit. Once approved by DEQ any permit-required plans become part of the permit by reference. DEQ may provide public notice and opportunity for public review of permit-required plans.

4.4 Modification and revocation by DEQ

The Director may, at any time before the expiration date, modify, suspend, or revoke this permit in whole or in part, in accordance with Oregon Revised Statutes 459.255, for reasons including but not limited to the following:

- Violation of any terms or conditions of this permit or any applicable statute, rule, standard, or order of the Commission
- Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts
- A significant change in the post-closure maintenance and monitoring of the disposal site

4.5 Modification by permittee

The permittee must apply for a modification to this permit if there is a significant change in facility operations or a deviation from permitted activities.

4.6 Public participation

DEQ will issue a public notice to inform the public of any significant changes to the permit.

4.7 Changes in ownership or address

The permittee must report to DEQ any change in the facility's ownership or the permittee's, or operator's name and address within 10 days of the change.

ALLOWABLE ACTIVITIES

5.0 AUTHORIZATIONS

5.1 In this section: This section describes the activities the permittee is authorized to conduct, including:

- Maintenance of closed landfill;
- Maintenance of landfill monitoring facilities, and
- Authorization of activities

5.2 Maintenance of closed landfill

The Southwest Landfill is closed and is no longer authorized to receive waste for disposal. This permit authorizes the permittee to maintain the closed landfill as required by this permit together with the cover soil and contours and the vegetative cover.

5.3 Maintenance of landfill monitoring facilities

The permittee is authorized to maintain the ground water monitoring and landfill gas monitoring systems and to expand those systems if necessary to maintain compliance with the requirements of this permit.

5.4 Authorization of activities

The permittee must conduct all facility activities according to the provisions of this permit. All plans required by this permit become part of the permit by reference once approved by DEQ. Any conditions of the approval are also incorporated into this permit unless contested by the permittee within 30 days of the receipt of a conditional approval.

6.0 PROHIBITIONS

6.1 In this section: This section describes specific activities the permittee is prohibited from conducting, including:

- Waste acceptance
- Open burning

6.2 Waste acceptance

The Southwest Landfill is permanently closed. The permittee must not accept any waste for disposal or dispose of any waste at this site.

6.3 Open burning

The permittee must not conduct any open burning at the site.

POST CLOSURE SITE MAINTENANCE

7.0 RECORDKEEPING AND REPORTING – OPERATIONS

7.1 In this section: This section describes recordkeeping and reporting closure and maintenance information for the facility, including:

- Non-compliance reporting;
- Permit display;
- Access to records; and
- Procedure.

7.2 Non-Compliance reporting

In the event that any condition of this permit or the DEQ's rules is violated, the permittee must immediately take action to correct the unauthorized condition and immediately notify DEQ at:

541-388-6146

Response: In response to such a notification, DEQ may conduct an investigation to evaluate the nature and extent of the problem, and to evaluate plans for additional corrective actions, as necessary.

7.3 Permit Display

The permittee must display this permit, or a photocopy thereof, where it can be readily referred to by appropriate personnel.

7.4 Access to Records

Upon request, the permittee must make all records and reports related to the permitted facility available to DEQ.

7.5 Procedure

The permittee must keep records and submit reports according to the following:

- Establish a location for the monitoring and facility maintenance records at the facility or another location mutually agreed upon with DEQ.
- Place environmental monitoring and site maintenance information in the facility maintenance record.
- Pay solid waste fees as required by OAR 340-097 for each year this permit is in effect. An invoice indicating the amount of the fee, set in accordance with DEQ's regulations, will be mailed prior to the due date.
- Retain copies of all records and reports for five years from the date created
- Update all records such that they reflect current conditions at the facility.

8.0 SPECIFIC MAINTENANCE CONDITIONS

8.1 In this section: This section describes specific conditions to which site operations must conform, including:

- Discovery of prohibited waste;
- Surface water structures;
- Air emissions;
- On-site roads, and
- Landfill gas management.
- Vegetation
- Surface Contour Maintenance
- Deed Record

8.2 Discovery of prohibited waste

In the event the permittee discovers any solid wastes at the facility, the permittee must, within 48 hours, notify DEQ and initiate procedures to isolate or remove the waste. Non-hazardous waste must be immediately transported to the transfer station for disposal, unless otherwise approved by DEQ.

In the event discovered wastes are hazardous or suspected to be hazardous, the permittee must, within 48 hours, notify DEQ and initiate procedures to identify and remove the waste. Hazardous wastes must be removed within 90 days, unless otherwise approved by DEQ. Temporary storage and transportation must be carried out in accordance with DEQ's rules.

8.3 Surface water structures

Any stormwater drainage structures must be maintained in good functional condition. Any significant damage must be reported to DEQ and repairs made as soon as possible.

8.4 Air emissions

Air emissions (dust, malodors, air toxics, etc.) from construction, operation and all other activities at the disposal site must be controlled in compliance with Oregon air quality standards.

8.5 On-site roads

Roads from the landfill property line to the closed disposal area and environmental monitoring locations must be constructed and maintained to minimize traffic hazards, dust and mud, and to provide reasonable vehicle access to monitoring locations.

8.6 Landfill gas management

Landfill gas must be controlled in accordance with the requirements of OAR 340-094-0060(4). Landfill gas collection, containment, removal and treatment systems must be maintained in good functional condition.

8.7 Vegetation

The permittee must establish and maintain a suitable vegetation cover over the closed areas of the landfill that is consistent with the proposed final use and is effective in controlling and preventing erosion of the final cover soil of the landfill.

8.8 Surface contour maintenance

The permittee must maintain the final surface contours of the landfill cover so that erosion and ponding of water is prevented to the maximum extent practicable. Erosion damage (cuts) must be repaired and seeded so that all waste remains covered.

The permittee must refill with approved final cover soil, grade, and seed all areas that have settled or where water ponds, and all areas where the cover soil has been damaged by cracking or erosion. Areas where vegetation has not been fully established must be fertilized, re-seeded and maintained.

Note: For the purpose of compliance with Condition 9.2 of this permit, DEQ does not consider surface contour maintenance activities to be a closed landfill cap repair activity that would require detailed engineering design plans.

8.9 Deed record

Within 30 days after permit issuance, the permittee must confirm that they have recorded the presence of the waste in the property deed record on file with the county in accordance with the requirements of OAR 340-094-0130(1)(a).

9.0 SITE DEVELOPMENT AND DESIGN

9.1 In this section: This section describes landfill cap and other ancillary facilities repair design plan and construction requirements including:

- Design plans;
- Construction requirements;
- Construction documents;
- Construction inspection;
- Construction report submittal;
- Construction report content, and
- Submittal address

9.2 Design Plans

The permittee must submit engineering design plans for repair of the closed landfill cap, or other ancillary facilities for DEQ review and approval at least 60 days prior to the anticipated construction date. The design plans must be prepared and stamped by a qualified professional engineer with current DEQ registration.

The engineering design plans must:

- Specify applicable performance criteria, construction material properties and characteristics, dimensions, and slopes, and
- Provide all relevant engineering analyses and calculations as a basis for the design.

9.3 Construction requirements

The permittee must perform all construction in accordance with the approved plans and specifications, including all conditions of approval, and any amendments to those plans and specifications must be approved in writing by DEQ.

9.4 Construction documents

Prior to construction of any landfill cover repair, or other ancillary facilities, the permittee must submit and receive written DEQ approval of complete construction documents for the project to be constructed. The construction documents submitted must:

- Define the construction project team;
- Include construction contract documents specifying material and workmanship requirements to guide how the Constructor is to furnish products and execute work, and
- Include a Construction Quality Assurance (CQA) plan, describing the measures taken to monitor that the quality of materials and the work performed by the Constructor complies with project specifications and contract requirements.

Reference: Following the current *Solid Waste Guidance* will expedite DEQ review of the construction documents.

9.5 Construction inspection

During any DEQ authorized construction, the permittee must provide DEQ with a summary and schedule of planned construction activities in order to facilitate DEQ inspection during the periods of construction.

9.6 Construction report submittal

Within 90 days of completing construction of any DEQ authorized construction, the permittee must submit to DEQ a Construction Certification Report, prepared by a qualified independent party, to document and certify that all required components and structures have been constructed in compliance with the permit requirements and approved design specifications.

9.7 Construction report content

The construction report must include:

- An executive summary of the construction project and any major problems encountered;
- A list of the governing construction documents;
- A summary of all construction and CQA activities;
- Test data documenting soil materials conformance with project specifications (if necessary);
- A summary of all CQA observations, including daily inspection records and test data sheets documenting materials deployment and installation in conformance with project specifications;
- Problem identification and corrective measures implemented;
- Designer acceptance reports for errors and inconsistencies;
- A list of deviations from design and material specifications, including documentation justifying the deviations, copies of change orders and recorded field adjustments, and copies of written DEQ approvals for deviations and change orders;
- Photographs and as-constructed drawings, including record surveys of subgrade, soil liner, granular drainage layer and protective soil layer, and a certification statement(s) and signatures legally representing the CQA consultant, designer and facility owner, one of which is that of a professional engineer with current Oregon registration.

9.8 Submittal address

All submittals to DEQ under this section must be sent to:

Oregon Department of Environmental Quality
Manager, Solid Waste Program
400 East Scenic Drive, Suite 307
The Dalles, OR 97058
Telephone: 541-298-7255

10.0 FINANCIAL ASSURANCE

10.1 In this section

This section describes the requirements for financial assurance at the facility, including:

- Financial assurance plan;
- Submittal;
- Use of financial assurance;
- Continuous nature, and
- Submittal address.

10.2 Financial assurance plan

The permittee must prepare or update a financial assurance plan and provide financial assurance for the costs of post-closure care, and corrective action, if any, annually. The plan must be placed in the facility file.

Reference: The plan must be prepared in accordance with OAR 340-094-140. Acceptable mechanisms are described in OAR 340-094-0145.

10.3 Submittal

The permittee must submit to DEQ evidence of the financial assurance consisting of:

- A copy of the first financial assurance mechanism; and
- A written certification that the financial assurance meets all state requirements.

Note: The permittee must annually review and update financial assurance in accordance with OAR 340-094-0140(6)(e).

10.4 Use of financial assurance

The permittee must not use the financial assurance for any purpose other than to finance the approved closure, post-closure, and corrective action activities or to guarantee that those activities will be completed.

10.5 Continuous nature

Continuous financial assurance must be maintained for the facility until the permittee or other person owning or controlling the site is no longer required to demonstrate financial responsibility for closure, post-closure care, or corrective action (if required).

10.6 Submittal address

All submittals to DEQ under this section must be sent to:

Oregon Department of Environmental Quality
Manager, Solid Waste Program
400 East Scenic Drive, Suite 307
The Dalles, OR 97058
Telephone: 541-298-7255

ENVIRONMENTAL MONITORING

11.0 ENVIRONMENTAL MONITORING PLAN (EMP)

11.1 In this section

This section describes requirements for an Environmental Monitoring Plan for the facility, including:

- Updated EMP submittal;
- EMP contents;
- EMP maintenance;
- Additional environmental monitoring points, and
- Submittal address.

11.2 Updated EMP submittal

Within 180 days of the permit issue date, the permittee must submit, for approval, two copies of an updated EMP to DEQ. The updated plan must be prepared and stamped by either a Geologist or a Certified Engineering Geologist, with current Oregon registration. Upon approval, this plan is incorporated into this permit by reference.

11.3 EMP contents

The updated EMP must include plans that implement an environmental monitoring program that will characterize potential facility impacts. The updated plan may consist of the previous approved EMP with any changes or additions since that time (i.e., approved permit-specific concentration limits,

revised parameter lists, revised schedules, new wells, etc.). At a minimum, the updated EMP should address the issues and topics found in Section 10 of DEQ's Solid Waste Guidance September 1, 1996, and the June 3, 2003 Selected Remedial Action, ODEQ VCP Staff Report, Southwest Landfill, Deschutes County, Oregon.

11.4 EMP maintenance

The permittee must revise the EMP as necessary to keep it reflective of current facility conditions, procedures and sampling requirements or changes. The permittee must submit all EMP revisions to DEQ for approval.

11.5 Additional environmental monitoring points

Any new or replacement monitoring point or device established during the time frame of this permit must be incorporated into the EMP. The updated plan must be resubmitted to DEQ for approval.

11.6 Submittal address

All required copies of submittals to DEQ under this environmental monitoring section must be received by the due date and delivered to:

Oregon Department of Environmental Quality
Manager, Solid Waste Program
400 East Scenic Drive, Suite 307
The Dalles, OR 97058
Telephone: 541-298-7255

12.0 ENVIRONMENTAL SAMPLING REQUIREMENTS

12.1 In this section

This section also describes general sampling requirements, including:

- Notification;
- Split sampling;
- Monitoring schedule;
- Monitoring after EMP approval; and
- Changes in sampling or split sampling.

12.2 Notification

DEQ must receive written notification of all upcoming sampling events at least ten (10) working days prior to the scheduled date of the sampling event at the following address:

Oregon Department of Environmental Quality
Manager, Solid Waste Program
400 East Scenic Drive, Suite 307
The Dalles, OR 97058
Telephone: 541-298-7255

13.2 Calculated Action Points

Calculated Action Points are found in Table 3 of the June 3, 2003 Selected Remedial Action, ODEQ VCP Staff Report, Southwest Landfill, Deschutes County, Oregon. Table 3 is included as Attachment 2 of this permit.

13.3 Calculated Action Point Monitoring Requirement

The permittee shall monitor all compliance points (wells) identified in Section 15.3 and the background well (MW-5) annually in the fall for the nine constituents found in Attachment 2 of this permit (Calculated Action Points).

13.4 Calculated Action Point Limits

If annual monitoring results exceed any of the risk based or hazard based concentrations listed in Attachment 2, the permittee shall immediately notify DEQ in writing and begin semiannual sampling, spring and fall quarters, for the Attachment 2 constituents.

13.5 Action Point Exceedance

If two of three consecutive semi-annual samples confirm an exceedance of a risk based or hazard based concentration listed in Attachment 2, the permittee shall notify DEQ in writing and implement the Contingency Action requirements of the June 3, 2003 Selected Remedial Action, ODEQ VCP Staff Report, Southwest Landfill, Deschutes County, Oregon.

13.6 Changing Calculated Action Points

If the permittee can demonstrate, to DEQ's satisfaction, that the background groundwater quality has significantly changed since the Calculated Action Points were established, and this change is not due to any influence from the permitted facility, then the permittee can propose, for DEQ approval, a revised level of the specific action points that are affected.

14.0 ENVIRONMENTAL MONITORING STANDARDS

14.1 In this section

This section describes requirements for evaluating compliance with environmental monitoring standards, including:

- Rule;
- Compliance points;
- Review of monitoring results;
- Resampling results;
- Methane limits;
- Methane exceedances, and

14.2 Rule

The permittee must not allow the release of any substance from the landfill into groundwater, surface water, or any other media which will result in a violation of any applicable federal or state air or water limit, drinking water rules, or regulations beyond the solid waste boundary of the disposal site or an alternative boundary specified by DEQ.

14.3 Compliance points

The following monitoring locations are designated as compliance points for all groundwater monitoring at the landfill: MW-2R, MW-7, MW-8, MW-9, MW-10 and the onsite Water Supply Well.

14.4 Review of monitoring results

The permittee must review the analytical results after each monitoring event according to the following table.

If data show results that...	Then...
<p>indicate a significant change in water quality at any monitoring point for Parameter Group 1,2, or 3 constituents except those constituents with Calculated Action Points listed in Attachment 2.</p> <p><u>Note: Examples of significant changes</u></p> <ul style="list-style-type: none"> • Detection of a VOC or other hazardous constituent not detected in background; • Exceedance of a Table 1 or 3 value listed in OAR 340-040 unless the background water quality is above these numerical limits; • Exceedance of a Safe Drinking Water Standard, • Detection of a compound in an order of magnitude higher than background. 	<ol style="list-style-type: none"> 1. Notify DEQ in writing within 10 days of receipt of laboratory results; and, 2. Perform resampling immediately and evaluate results as described below. <p><u>Note:</u> If this is a known release, previously confirmed to DEQ in writing, resampling is not required. The nine constituents listed in Attachment 2, Calculated Action Points, are known releases that do not require immediate resampling. These nine constituents shall be monitored per section 14 of this permit.</p>
None of the above	Continue groundwater monitoring with next scheduled sampling event.

14.5 Methane limits

The concentration of methane must not exceed:

- 25 percent of the Lower Explosive Limit for methane in onsite structures (excluding gas control structures or gas recovery system components); or,
- The Lower Explosive Limit for methane at the facility boundary or alternate location as approved by DEQ.

Note: The Lower Explosive Limit for methane is 5 percent.

14.6 Methane exceedances

If methane levels exceed the specified limits, then the permittee must:

1. Immediately take all necessary steps to ensure protection of human health;
2. Within 7 days of detection (unless DEQ approves an alternative schedule), enter the methane levels in the operating record and describe measures taken to protect human health and safety; and,

Within 60 days of detection, implement a remediation plan for the methane releases, incorporate the plan into the monitoring records, and notify DEQ that the plan has been implemented.

15.0 RECORDKEEPING AND REPORTING – ENVIRONMENTAL MONITORING

15.1 In this section

This section describes recordkeeping and reporting requirements associated with environmental monitoring, including:

- Annual environmental monitoring report (AEMR);
- Statement of compliance;
- Annual environmental monitoring report contents;
- Submittal address;
- Split sampling submittal;
- Lab address, and
- Department response to split samples.

15.2 Annual environmental monitoring report (AEMR)

Prior to March 31 of each year for the duration of this permit, the permittee must submit to DEQ two hard copies and one electronic copy of an annual environmental monitoring report covering the past year from January 1st to December 31st. The report must be prepared and stamped by either a Geologist or a Certified Engineering Geologist, with current Oregon registration. The report must follow the format approved in the Environmental Monitoring Plan.

Note: Whenever possible, the permittee must submit two-side copies of all hard copy reports.

15.3 Statement of compliance

A short cover letter must be included in the AEMR that:

- Compares the analytical results with the relevant monitoring standards (CLVs or CAPs);
- States whether or not federal or state standards or any Compliance Action Points were exceeded for the relevant media, and
- States whether or not a significant change in water quality has occurred.

15.4 Annual environmental monitoring report (AEMR) contents

Each AEMR must reflect actual and true conditions at the facility. Data presented in the reports must be as error-free as possible compared to the original field and lab data. The AEMR, at a minimum, must contain:

- Review of all significant events that occurred at the site during the last year;
- Review of the monitoring network performance and recommendations for changes;
- Summary of all the data collected in the past year media including, but not limited to: groundwater, LFG (include any air sample data samples);
- A summary of any data problems (examples include, but are not limited to QA/QC failures, flagged data, switched samples, etc.);
- Piezometric maps for each sampling event for each monitored water bearing zone of concern;
- Time history plots for all analyzed parameters during the current year;
- Every fourth year an anion-cation balance for each location that has adequate data shall be calculated. An additional explanation must be included for any balance outside of $\pm 10\%$ in error, and,
- A copy of all field and lab data for the past year.

15.5 Split sampling submittal

Within 90 days of any split sampling event, the permittee must submit the following information from the split sampling event to DEQ's laboratory:

- A copy of all information pertinent to the sample collection handling, transport and storage, including field notes;
- Copies of all laboratory analytical reports;
- Copies of all laboratory QA/QC reports;
- Site map showing flow directions and contours, and
- Any other data or reports requested by DEQ.

15.6 Lab address

All split sampling reporting must be sent to:

Oregon Department of Environmental Quality
Laboratory and Environmental Assessment
3150 NW 229th Ave., Suite 150
Hillsboro, OR 97124
Phone: 503-693-5700
Fax: 503-693-4999

15.7 DEQ response to split samples

If requested by the permittee and after the permittee has submitted all split sampling data information, DEQ's lab may send the permittee a copy of:

- The DEQ's analysis of the split sample;
- A copy of the QA/QC report;
- A copy of the analytical report, and/or
- A copy of field data sheets.

16.0 ENVIRONMENTAL MONITORING NETWORK

16.1 In this section

This section describes requirements for the environmental monitoring network, including:

- Well installation;
- Monitoring devices;
- Access to monitoring devices;
- Damage reporting;
- Device construction;
- Construction reporting;
- Recommendation to abandon;
- Gas system maintenance;
- Gas system damage repair, and
- Submittal address

16.2 Well installation

Any new groundwater monitoring wells or landfill gas monitoring wells must be installed at locations and in a manner approved by DEQ. A work plan must be submitted and approved by DEQ prior to the construction of a new well.

16.3 Monitoring devices

The permittee must protect, operate, and maintain gas, groundwater, leachate and surface water monitoring devices so that samples representative of actual conditions can be collected.

16.4 Access to monitoring devices

The permittee must maintain reasonable all-weather access to all monitoring devices and/or locations in order to facilitate sample collection and/or inspection.

16.5 Damage reporting

Any damage to a monitoring device must be reported to DEQ in writing within fourteen (14) days of the discovery, along with a description of proposed repair or replacement measures and a time schedule for completion of this work.

Examples: damage impairing well function or changing the physical location to any degree

16.6 Device construction

All monitoring well abandonment (decommissions), replacements, repairs and installations must be conducted to comply with the Water Resources Department Rules OAR 690-240 and with DEQ's *Guidelines for Groundwater Monitoring Well Drilling, Construction and Decommissioning*, dated August 1992.

16.7 Construction reporting

All monitoring well repairs, abandonments, replacements and installations, including driller's logs, well location information and construction information must be documented in a report prepared and stamped by either a Geologist or a Certified Engineering Geologist, with current Oregon registration. The report must be submitted to DEQ within thirty (30) days of the action and be included in the next AEMR.

16.8 Recommendation to abandon

The permittee must submit a recommendation to DEQ to decommission or replace any well in the monitoring network that:

- Has been installed in a borehole that hydraulically intersects two saturated stratas;
- Does not have the corresponding and necessary supporting documentation of appropriate installation or construction, or
- Is damaged beyond repair or destroyed during the time frame of this permit.

16.9 Gas system maintenance

If a landfill gas containment, collection, removal, treatment and monitoring system is in place, the permittee must operate and maintain that system in good working order such that nuisance odors are deterred to the maximum extent practical and methane concentrations do not exceed compliance limits.

16.10 Gas system damage repair

Within 60 days of discovery of the damage, the permittee must replace or repair the damage to any equipment in the gas system and submit a written inspection report to DEQ.

16.11 Submittal address

All required copies of submittals to DEQ under this section must be received by the due date and delivered to:

Oregon Department of Environmental Quality
 Manager, Solid Waste Program
 400 East Scenic Drive, Suite 307
 The Dalles, OR 97058
 Telephone: 541-298-7255

COMPLIANCE SCHEDULE

17.0 SUMMARY OF DUE DATES

17.1 Summary

The following is a summary of event-driven reporting required by this permit. This section does not include routine reporting and submittals required by this permit.

Due Date	Activity	See section...
60 days before any landfill cap repair construction	Submit design plans	9.2 Design plans
90 days after completion of any major construction	Submit construction certification	9.6 Construction report
Within 180 days of permit issuance	If needed, submit updated Environmental Monitoring Plan (EMP)	12.2 Environmental Monitoring Plan
By March 31 st for each year the permit is in effect	Submit an Annual Environmental Monitoring Report (AEMR)	16.2 AEMR
30 days before any well construction	Submit well construction report	17.7 Construction reporting

ATTACHMENTS

18.0 Attachment listing

The following attachments to this document are:

Number	Description
1	Parameter Groups
2	Calculated Action Points
3	Groundwater Compliance Sampling Schedule

ATTACHMENT 1: PARAMETER GROUPS

In this attachment

This attachment describes the parameter groups and any associated requirements for environmental monitoring.

Note: Method means EPA SW 846 Method [suggested methods are in square brackets].

**Group 1a:
Field indicators**

The following parameters comprise the field indicators parameter group:

Elevation of water level	Specific Conductance
pH	Dissolved Oxygen
Temperature	Eh

These parameters must be measured in the field at the time samples are collected, either down-hole in situ, in a flow-through well, or immediately following sample recovery, with instruments calibrated to relevant standards.

**Group 1b:
Leachate indicators**

The laboratory indicators parameter group includes the following parameters:

Hardness (as CaCO ₃)	Total Dissolved Solids (TDS)
Total Alkalinity (as CaCO ₃)	Total Suspended Solids (TSS)
Total Organic Carbon (TOC)	Chemical Oxygen Demand (COD)
pH (lab)	Tannin/Lignin
Specific Conductance (lab) [Method 9050A]	

Proper techniques for sample handling, preservation, and analysis are specific to each individual analyte: Follow appropriate EPA techniques or AWWA Standard Methods.

**Group 2a:
Common anions and cations**

The common anions and cations parameter group includes the following parameters:

Calcium (Ca)	Manganese (Mn)
Sulfate (SO ₄) [Method 9035]	Magnesium (Mg)
Ammonia (NH ₃)	Chloride (Cl) [Method 9250]
Sodium (Na)	Carbonate (CO ₃)
Nitrate (NO ₃) [Method 9210]	Potassium (K)
Silica (SiO ₂)	Bicarbonate (HCO ₃)
Iron (Fe)	Ammonium (NH ₄)
Fluoride (F)	

Dissolved concentrations must be measured. Field-filter and field-preserve samples according to standard DEQ and/or EPA guidelines and analyze by appropriate EPA or AWWA Standard Methods techniques. Report results in mg/L and meq/L.

**Group 2b:
Trace
metals**

The trace metals parameter group includes the following parameters:

Antimony (Sb)	Chromium (Cr)	Selenium (Se)
Arsenic (As)	Cobalt (Co)	Silver (Ag)
Barium (Ba)	Copper (Cu)	Thallium (Tl)
Beryllium (Be)	Lead (Pb)	Vanadium (V)
Cadmium (Cd)	Nickel (Ni)	Zinc (Zn)

If the Total Suspended Solids concentration is...	analyze for...
less than or equal to 100.0 mg/L in the sample	total concentrations (unfiltered)
Greater than 100.0 mg/L in the sample	both total (unfiltered) and dissolved (field-filtered)

Field-preserve samples according to standard DEQ and/or EPA guidelines and analyze by EPA Method 6010 or DEQ-approved equivalent.

**Group 3:
Volatile
organic
constituents**

Analyze for all compounds detectable by EPA Method 8260A or EPA Method 524.2, include a library search to identify any unknown compounds present. The DEQ must pre-approve alternative methods like EPA Method 8021B.

**Group 4:
Assessment
monitoring**

Assessment monitoring parameter group includes the following parameters:

- Semi-volatile Organic Constituents, including Phenols, EPA Method 8270
- Mercury, EPA Method 7470
- Cyanide, EPA Method 9010
- Nitrite

All Method 8270 analyses must include a library search to identify any unknown compounds present.

**Group 5:
Surface
water and
leachate**

The surface water parameter group includes the following parameters:

- | | |
|---|---|
| Total Kjeldahl Nitrogen (TKN) | Total Coliform Bacteria [EPA Method 9131] |
| Total Phosphorus (P) | Fecal Coliform Bacteria [EPA Method 9131] |
| Orthophosphate (PO ₄) | E. Coli |
| Biological Oxygen Demand (BOD) | |
| Total Halogenated Organics (TOX) [EPA Method 9020B] | |

**Group 6:
Other
Assessment
parameters**

The following comprise additional assessment parameters:

- Dioxins and Furans [EPA Methods 8280 and/or 8290]
- Phenolics [EPA Methods 9065, 9066 and 9067]
- PCBs [EPA Methods 8080 and 8270]
- Pesticides, Herbicides and Fungicides [EPA Methods 8080, 8141, 8150, 8151, 8270]

ATTACHMENT 2: CALCULATED ACTION POINTS

Calculated Action Points are found in Table 3 of the June 3, 2003 Selected Remedial Action, ODEQ VCP Staff Report, Southwest Landfill, Deschutes County, Oregon, and are as follows:

Chemical Parameter	Risk Based Action Limit (ppb)	Hazard Based Action Limit (ppb)	Maximum Contaminant Limit (ppb)
Benzene	21		5
Chloroethane	350		N/A
1,4-Dichlorobenzene	45		75
Cis-1,2-Dichloroethene		4,500	70
1,1-Dichloroethene		51,000	N/A
Tetrachloroethene	16		5
Trichloroethene	2		5
Vinyl Chloride	1.1		2
Chromium		4,200	100

ATTACHMENT 3:

**GROUNDWATER COMPLIANCE SAMPLING SCHEDULE
 FOR SOUTHWEST LANDFILL, DESCHUTES COUNTY**

Wells	Sampling Parameters	Frequency
Compliance wells and background well MW-5	Benzene Chloroethane 1,4-Dichlorobenzene Cis-1,2-Dichloroethene 1,1-Dichloroethane Tetrachloroethene Trichloroethene Vinyl Chloride Total Chromium	Annually Fall Quarter
All Compliance Wells and background well MW-5	Parameter groups 1,2 and 3	For Split Sampling Events, See Condition 13.3 for sample collection quarter (spring or fall).

