

Landfill Closure Guidance

General

This fact sheet provides information required for the Ministry of Environment (the ministry) to expedite the approval process for landfill closure. Landfill closure is regulated by Municipal Refuse Management Regulations, 1986 for municipal landfills and the Environmental Management and Protection Act, 2002 for industrial landfills and all other waste management.

Landfill closure application procedures will be included in the site-specific operating permit. Owners should follow the site assessment and corrective action plan chapters of the Saskatchewan Environmental Code for impacted sites, effective June 1, 2015.

Closing your landfill

Landfill owners should close the landfill if the owner no longer intends to accept waste or waste has not been accepted at the landfill for at least two consecutive years. As outlined in Section 7 of the permit to operate, the owner should contact the assigned environmental project officer at least 180 days before closing the site.

Steps to closing a site:

1. Provide written notice to the Environmental Project Officer.
2. Post a visible notice at the entrance warning against trespassing, illegal dumping and vandalism.
3. Ensure the site is clean of any litter, unused containers, unused tanks or waste in temporary storage areas, including recyclable materials, and dispose of those items.
4. Provide a final cover to the landfill.

Closure Plan

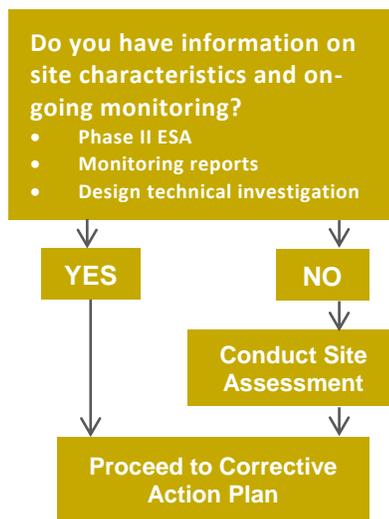
Once the owner receives written approval from the environmental project officer that the site may close, the owner should:

1. Determine if the site-information is sufficient for the ministry, otherwise conduct a site assessment.
2. Develop a corrective action plan to ensure long-term protection of the environment and the public.

Closure Report

The closure report should include:

- a list of any permit or notification numbers;
- owner contact information;
- description of communities and industries served during the operating phase;
- total quantity and description of waste disposed of at the landfill as of the closing date;
- period the landfill was in operation;
- site plan that shows adjacent land, land uses, location of drinking water wells, and surface water bodies within one kilometre;
- geographical location of the boundary, waste footprint, groundwater monitoring wells, leachate holding ponds, storm water detention ponds/manholes/sumps for leachate collection, and current status of each;
- estimate of the remaining contaminating lifespan of the landfill inferred from an interpretation of environmental monitoring or site assessment results.



The closure report should include the following appendices:

- A. Site Assessment** - Landfills are considered potentially impacted sites and require a site assessment.
- B. Corrective Action Plan** – Owners should provide corrective action for closure of a landfill to ensure public safety and protection of the environment.

See the *Guidance Document: Impacted Sites, 2014* for guidance for the Site Assessment and Corrective Action Plan chapters of the Saskatchewan Environmental Code.

Post-closure Care

Owners should follow best management practices for post-closure care to maintain public safety and protect the environment. It is the responsibility of the owner to ensure that the post-closure care is followed in accordance with the corrective action plan.

Landfill Closure Plan – procedures for termination of waste acceptance, closing the site, ensuring sufficient site information is available, and determining appropriate corrective action.

Closing a Site – terminating waste acceptance, notifying ministry, ensuring signage and public safety, cleaning site, and covering waste footprint to cut-off contamination pathways.

Site Assessment – an investigation and report (equivalent to a Phase II ESA) used to characterize physical site conditions and identify potential or existing environmental impacts. According to the Canadian Standard Association (CSA), the results of the Phase II ESA Standard Z769-00 are used to determine design specification, on-going monitoring requirements, and corrective action. The site assessment consists of:

- subsurface soil and groundwater investigation by advancing boreholes and installing monitoring wells.
- chemical analysis of representative soil and groundwater.
- surveying groundwater levels to verify the groundwater flow direction and preparing report with findings.

Corrective Action Plan – a plan that details the methods used to prevent, minimize, mitigate, remedy or reclaim adverse effects. May include but not limited to:

Decommissioning – the dismantling of infrastructure, land reclamation and remediation of a facility undertaken subsequent to the termination waste acceptance.

Land reclamation – the stabilization, contouring, maintenance, conditioning and reconstruction of the surface of the land to a state that returns the landfill to the planned end-use as described in the application, unless otherwise specified in writing by the Minister

Remediation – the removal or reduction of contaminant concentrations to an acceptable land use endpoint based on risk-based generic numerical objectives.

Monitor and natural attenuation – regular monitoring of the progress of natural attenuation processes that can degrade contaminants in soil and groundwater. May be used with other options or as a final solution, providing the rate of contaminant degradation is fast enough to protect human health and the environment.

Contact and References

Saskatchewan Ministry of Environment
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or 306-787-2584
Web: www.environment.gov.sk.ca
E-mail: Centre.Inquiry@gov.sk.ca

Questions about hazardous waste refer to: Hazardous Substances and Waste Dangerous Goods Regulations. Web: <http://www.qp.gov.sk.ca/documents/English/Regulations/Regulations/E10-2R3.pdf>