

Waste Incineration

What are incinerators used for?

There are incinerators approved for single stream wastes such as animal carcasses and organics. At this time, there are no small scale incinerators approved for mixed waste in Saskatchewan.

What is the concern with incineration of mixed waste?

Proper incineration of mixed waste requires a very high temperature. Improper incineration results in harmful air pollutants including dioxins and furans which have several health effects including cancer. These pollutants also settle out into the environment and impact the ecosystem. The ash that is left at the end of the process is also a concern as it may be a hazardous substance which is more difficult to dispose of.

More information on the [Health and Environmental Effects of Open Burning of Refuse and Other Solid Wastes](#) can be found on saskatchewan.ca/environment.

Regulatory requirements:

1. Proponent Self-Assessment: A preliminary assessment of the expected impacts of the proposed project on the environment and their relative significance to identify whether a project is likely to be a 'development' under Environmental Assessment and requires approval of the Minister of Environment. Proponents can complete the on-line [Environmental Self-Assessment](#).
2. Air Quality Standards and Testing: The air emissions from an incinerator must meet the Saskatchewan Ambient Air

Quality Standards ([SAAQS](#)), and the Canada-wide Standard (Canada-wide Standards) for dioxins and furans.

3. Residual Ash Testing: The USEPA Test Method 1311, Toxicity Characteristic Leaching Procedure ([TCLP](#)), provides guidance to determine if ash is safe to dispose of in a landfill.
4. Environmental Protection Plan (EPP): Under the Industrial Source (Air Quality) Chapter of the Code, persons operating any type of incinerator are required to submit an EPP certified by a Qualified Person (QP). An EPP is a plan that spells out the overall environmental management of an incinerator which details the methods to be employed to prevent, minimize, monitor, mitigate, remedy or reclaim an adverse effect before, during or after any activity. Use of best available pollution prevention and control techniques will be outlined in the EPP. It is up to a QP to design an EPP to ensure the incinerator does not create adverse effects on the environment. An EPP must meet the results-based objectives of the Industrial Source (Air Quality) Chapter ([ISAQC](#)).
5. Recommended Steps to Help Manage a Waste Incinerator Project:
 - i. Understand your waste stream
 - ii. Select the appropriate incinerator designed and tested for destroying the pre-determined waste stream

- iii. Submit air and ash testing results to the ministry before purchasing an incinerator
- iv. Conduct an on-line self-assessment to satisfy environmental assessment requirements
- v. Submit an EPP, certified by a QP, to the ministry for review and approval
- vi. Obtain local and government approvals prior to installing the incinerator
- vii. Operate the incinerator for optimum combustion
- viii. Safely handle and dispose of incinerator residues (ash, waste that remains etc.)
- ix. Maintain records of operation and maintenance for local or regulatory agencies
- x. Conduct environmental testing according to your ministry approved EPP
- xi. Notify the ministry of environment if conditions exist and the EPP is not being met.

More info?

For information on waste incinerators, contact the Saskatchewan Ministry of Environment Client Service Office at
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