

Air Standards

Ontario protects air quality through a comprehensive air management framework that includes regulations, targeted programs and partnerships with other jurisdictions to address sources of air pollution. This framework addresses emissions from the electricity sector (including coal-fired generation stations), vehicles, cross-border sources, as well as commercial and industrial facilities.

Ontario's local air quality regulation (O. Reg. 419/05: Air Pollution – Local Air Quality) works within the province's air management framework by regulating air contaminants released into communities by various sources, including local industrial and commercial facilities. The regulation aims to limit exposure to substances released into air that can affect human health and the environment, while allowing industry to operate responsibly under a set of rules that are publicly transparent.

The regulation includes three compliance approaches for industry to demonstrate environmental performance and make improvements when required. Industry can:

- meet the general air standard
- request and meet a site-specific standard or
- register and meet the requirements under a sector-based technical standard (if available).

All three approaches are allowable under the regulation.

What are General Air Standards?

Air standards are legal limits for contaminants in air. They are set at concentrations that are protective against adverse effects. Ontario develops air standards by reviewing scientific information about the effects of contaminants on health and the environment, as well as approaches taken in setting air quality criteria by leading organizations such as the US Environmental Protection Agency, World Health Organization, Health Canada, and various European agencies.

Air standards may also be set based on nuisance effects such as odour and dust. More than one air standard may exist for a contaminant depending on the scientific information related to its one or more effects (e.g., total reduced sulphur).

Significant progress has been made in recent years to update or set new air standards. Since 2005, 68 new and/or updated air standards have been introduced into the regulation.

How are Air Standards used in the Regulation?

Air standards are used to assess the contributions of a contaminant to the local air by a regulated facility. If a facility can demonstrate that the maximum concentration of the contaminant emitted by the facility does not exceed the air standard, no additional requirements are triggered under the regulation. Most facilities in Ontario meet the general air standards.

While a measured exceedence of a standard may result in further action being taken, compliance with air standards is primarily assessed using air dispersion models. More advanced dispersion models are being phased in by sector (see below). Regulated facilities use Emission Summary and Dispersion Modelling (ESDM) reports to compile air dispersion modelling information and estimate the resulting concentration of a contaminant in the local air. The executive summary of an ESDM may be requested by the public.

Monitoring may also be used in combination with modelling to assess a facility's performance against the air standard.

In situations where the air standard is or may be exceeded, facilities are required to collect more detailed information about exposure to the contaminant being modelled or measured. This information may be used to confirm that the air standard is met or identify the need for another compliance approach.

Because general air standards are set based on science, they may not be achievable by a facility or a sector due to unique technical or economic limitations. Instead of making the air standard less stringent, the regulation allows facilities or sectors to exceed the air standard as long as they are working to reduce their air emissions as much as possible with technology-based solutions and best practices. The Ministry of the Environment closely oversees their progress using a framework for managing risk that was developed in cooperation with public health units in Ontario and other stakeholders.

Some facilities may never meet the general air standard and instead are regulated under either a site-specific standard or sector-based technical standards.

Key Phase-In Dates for Compliance

The Ministry of the Environment continues to develop general air standards to regulate air contaminants.

All facilities operating under the air standards compliance approach are required to comply with the air standards. New/updated standards are typically phased in over a period of time so that industry can take actions needed to comply with the regulation.

Air Standards Phase-In Dates

February 1, 2010 – 33 new or updated standards came into effect.

February 1, 2013 – 18 new or more stringent standards came into effect.

July 1, 2016 – 9 new or more stringent air standards come into effect.

Air Dispersion Model Phase-In Dates

February 1, 2010 – Facilities in the following sectors were required to use the more advanced approved air dispersion models.

- Metal ore mining
- Fossil fuel electric power generation
- Petroleum refineries
- Basic chemical manufacturing
- Resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing
- Iron and steel mills and ferro-alloy manufacturing
- Non-ferrous metal (except aluminum) smelting and refining

These facilities must also prepare and annually update an ESDM report.

February 1, 2013 – Facilities in the following sectors are required to use the more advanced approved air dispersion models:

- Pulp, paper and paperboard mills
- Other petroleum and coal products manufacturing
- Chemical manufacturing
- Urethane and other foam product (except polystyrene) manufacturing
- Other non-metallic mineral product manufacturing
- Primary metal manufacturing
- Coating, engraving, heat treating and allied activities
- All other miscellaneous fabricated product manufacturing
- Transportation equipment manufacturing
- Waste treatment and disposal¹

These facilities must also prepare and annually update an ESDM report.

February 1, 2020 – All other facilities are required to use the more advanced approved air dispersion models.

¹ In accordance with the regulation, certain industrial operations are exempt from this class. Please refer to the [regulation](#) for specific exemptions.

Notification Requirements for Facilities

The Local Air Quality Regulation requires facilities to notify the Ministry of the Environment if air standards may be exceeded. An abatement plan must be submitted within 30 days of notification.

For more information on notification requirements under the regulation, please go to [Notification of Exceedence – Regulation 419/05](#).

Where can I get more information?

For a comprehensive list of air standards, please refer to the Ministry of the Environment document entitled: [Summary of Standards and Guidelines to support Ontario Regulation 419: Air Pollution – Local Air Quality](#), (April 2012) (as amended). The document is available in two formats, sorted by chemical name and by Chemical Abstract System (CAS) Number.

For further information about [Ontario's Local Air Quality Regulation](#) and air standards, please visit the Ministry of the Environment's web site at www.ontario.ca/ministry-environment or contact:

Public Information Centre
Ministry of the Environment
Tel: (416) 325-4000 or 1-800-565-4923
TTY Line (for persons who are deaf or hard of hearing):
416-326-9236 or 1-800-515-2759
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