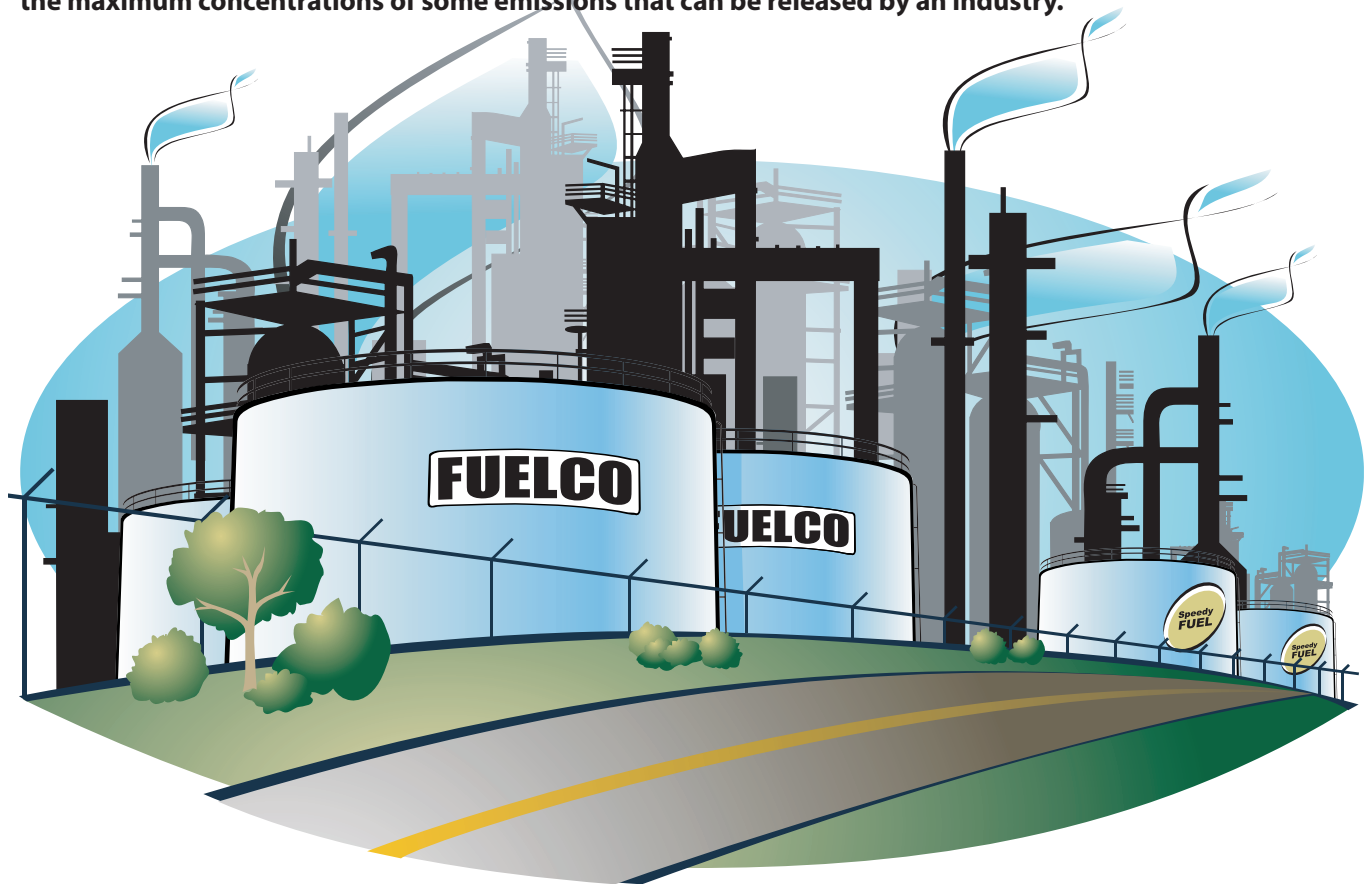


REGULATING AIR QUALITY IN ALBERTA

Acts, Regulations and Objectives

Alberta Environment (AENV) uses Acts and Regulations as part of an overall program to protect the environment in Alberta. In general terms, an Act is created when a Bill (proposed Act) is discussed and approved by the Alberta Legislature. In many cases, one or more Regulations are developed for an Act. In addition to containing compliance actions (penalties) for breaking the law (Act), Regulations provide details on what is expected or required of a business or individual by the Act. For example, the *Substance Release Regulation*, which falls under the *Environmental Protection and Enhancement Act (EPEA)*, identifies the maximum concentrations of some emissions that can be released by an industry.



Objectives, guidelines or standards are developed to give additional guidance or expectations for businesses or individuals on activities that may affect the environment. They provide further direction on activities that are covered by the Act. For example Alberta's Ambient Air Quality Objectives (AAAQO) are used as part of industrial approvals to regulate facility operations. The AAAQO are pre-established levels for ambient concentrations of certain pollutants that are considered harmful to the environment and human health. When concentration levels are greater than the set objective, it indicates a possible emissions problem and an investigation may be initiated.

When operating approvals are issued to a business or industry for their work, objectives are used when determining limits for specific emissions (refer to the *Air Quality Modeling Factsheet*). Objectives may be developed in a few ways, depending on the subject area, but are generally developed through one or a combination of the following:

- In-house (within the department)
- Through multi-stakeholder consultation
- Based on a federal government standard

Codes of Practice and Approvals

Alberta Environment uses legislation to determine what activities require an approval. An approval can be issued for up to 10 years and is developed through a process that allows for public input. When an approval is issued, it ensures the activity is conducted in a manner that minimizes any potential of harming the environment. It also ensures the applicant follows the appropriate procedures, and has systems and safeguards in place to protect the environment and public. Industrial approvals related to air quality include:

- **Emission limits**
- Pollution control technology (refer to pollution control section of the Emissions Factsheet)
- Emission reduction procedures (refer to pollution prevention section of the Emissions Factsheet)
- **Stack design**
- Monitoring and reporting requirements

When setting emission limits, local weather patterns and terrain are also considered.

Codes of Practice are also developed under the Act and are very specific to an activity, such as the Codes of Practice for Small Incinerators, Sawmill Plants and Asphalt Paving Plants. Codes are issued in place of formal approvals, and give details on operating conditions and practices for activities that have less environmental impact. Individual companies agree to meet these codes and are then issued a registration. AENV conducts random compliance checks to make sure the requirements in the code of practice are met.

Approvals for large industrial operations may include requirements for monitoring of the ambient air, of emissions as well as many other **environmental factors**. The intent is to require monitoring of emission and effluent sources of environmental significance (note: this monitoring is limited by available technology), as well as aspects of the environment that could be impacted by the industrial operation.

Smaller facilities do not require an approval or code of practice (e.g., paint shops). However, they still must abide by the general provisions in *EPEA* and cannot cause adverse effects to the environment. Other sources of emissions, such as lawnmowers, fireplaces and home heating are not specifically regulated. However, AENV may investigate the operations of these emitters if they are causing a significant adverse effect.



Exceedance of Guidelines or Objectives

Sometimes the levels listed in the objectives are exceeded. For example, when monitoring indicates ambient air concentrations near a facility are higher than allowed in the objectives, the facility must notify AENV as soon as this increased level is discovered. The facility must try to correct the situation and send AENV a written description of the incident and why it happened. In the event that an exceedance occurs at a monitoring station that is not associated with an industrial facility, an exceedance is reported by the **Regional Airshed Zone** and followed up with a written description of the incident.

Alberta Environment uses a set of criteria to evaluate the severity of a contravention and determine the corrective actions that are needed. These criteria include the level, frequency and duration of an emission, its impact on the environment and past enforcement history. In some cases, AENV staff may investigate an incident further, which involves interviewing facility employees and taking statements, and collecting physical and documentary evidence from the site.

Depending on what is found during the investigation, AENV may do one of the following:

- Take no further action
- Issue a written warning, an environmental protection order, an enforcement order or administrative penalty
- Prosecute the operator

The primary goal is to identify and correct areas of non-compliance and prevent them from occurring again. Alberta Environment has a variety of tools available to ensure compliance; these include education, prevention and enforcement.



Role of Alberta Environment and Other Agencies in Regulating Industrial Facilities

AENV and the Energy Resources Conservation Board (ERCB) are regulatory agencies and are often both involved in issuing approvals to operate. Which agencies are involved depends on the type of activity, the size of the facility, and the scale of environmental impact. For example, large industrial operations such as bitumen upgraders require the involvement of both AENV and ERCB, as well as other government departments, and the approval process may take up to two years or more.

Approvals issued by AENV contain air emission limits. These approval are issued to upgraders, refineries, pulp and paper mills, and other emission sources. The ERCB regulates the actual development of Alberta's energy resources, including oil, natural gas, oil sands, coal and pipelines. The federal government is involved through broader, over-arching regulations such as unleaded gasoline and vehicle emission standards.

Definitions

Administrative penalty - a monetary fine issued for a minor contravention of an approval or code of practice.

Regional Airshed Zones - are established by stakeholders as a means to deal with air quality issues in a region.

Ambient concentration - pollutant concentration as measured outside buildings and structures. It can also mean concentrations measured beyond the fence line of an industrial facility.

Emission limits - depend on existing air quality and air quality objectives, and are often determined using results from air quality modeling.

Enforcement Order - a legal order issued to a regulated party that requires a contravention to be remedied and, where appropriate, requires actions to be taken that prevent future contraventions. Examples of required actions include orders to stop activity or install pollution control device(s).

Environmental factors - include ambient air, stack, wastewater and treated sewage releases, air quality, surface water quality, groundwater quality, soil quality, and hazardous wastes.

Environmental Protection Order - issued to prevent contraventions of the Environmental Protection and Enhancement Act. This order is issued when there is reason to believe that an action may harm the environment. Actions required may include maintaining a record, reporting, auditing or changing procedures. These actions are designed to provide information on the suspected operation.

Prosecution - all legislation enforced by Alberta Environment includes provisions for prosecution. The penalties depend on the severity of the contravention and may include fines or jail time.

Stack design - effective stack design allows efficient dispersion of emitted pollutants.

Written Warnings - issued for minor contraventions and normally given to first-time offenders. The desired outcome is to have the recipient come into voluntary compliance after being made aware of the offence. Repeated non-compliance may result in increased enforcement action.

Making it Clear is a series of fact sheets on air quality in Alberta developed for Fort Air Partnership with support provided by Alberta Environment. To obtain the series visit www.fortair.org or call 1-800-718-0471