

Transitional Operating Conditions

Background - Regulation 419/05

- O. Reg. 419/05 contains over 130 air standards for a variety of contaminants.
- Facilities applying for an Environmental Compliance Approval (ECA) or governed by O. Reg. 1/17 – the Air Emissions Environmental Activity and Sector Registry (EASR) regulation - must demonstrate compliance with the standards at a point of impingement (POI) using approved dispersion models and document results in an Emission Summary Dispersion Modelling (ESDM) Report.

Background: Current TOC Requirements Regulation and Guidance

- Paragraph 1 of subsection 10 (1) of O. Reg. 419/05 requires a facility to use an approved dispersion model with a scenario that assumes operating conditions that result in the highest contaminant concentration off-site of the facility property. In order to determine which scenario results in the highest, a facility must assess a number of scenarios assuming multiple operating conditions.
- The ESDM Procedure indicates the following operating conditions be considered when determining the highest contaminant concentration:
 - Conditions which are typical or routine
 - Transitional operating conditions which result in the emission of contaminants with acute health effects.

Proposed Regulatory Amendments

Operating conditions to be assessed under paragraph 1 of subsection 10 (1) to now include:

- Requirement to consider the following types of scenarios when determining, for all contaminants, which scenario results in the highest POI concentration:
 - Scenarios that assume operating conditions that reflect the maximum design capacity of the facility;
 - Scenarios that assume start-up operating conditions of a facility or part of a facility;
 - Scenarios that assume shut-down operating conditions of a facility or part of a facility; and
 - Any other scenario that occurs when the facility is operating normally.
- The scenario that results in the maximum concentration of a contaminant at a POI must be included in the ESDM report for compliance assessment.

Proposed Regulatory Amendments

Petroleum Refineries Provision:

- In addition to the scenarios required to be assessed under paragraph 1 of subsection 10 (1) of O. Reg. 419/05, petroleum facilities (NAICS 324110 and 324190) would also be required to model the scenario that, for a one-hour averaging period, assumes operating conditions for the facility that would result in the highest concentration of SO₂ at a POI that the facility is capable of when acid gas is flared at the facility.
- In order to determine the acid gas flaring scenario that would result in the highest POI concentration of SO₂, there is a requirement to consider the following types of scenarios:
 - The scenario that assumes operating conditions at the facility when the flare system is operating at design capacity;
 - Any other scenarios occurring when acid gas is flared.

Proposed regulatory amendments

Director's Notices:

- First new notice provision would allow the Director, on a case-by-case basis, to require that a specific scenario (to be specified by the Director) be assessed to determine if that scenario results in the highest POI concentration for the purposes of paragraph 1 of subsection 10 (1).
- Second new notice provision would allow the Director, on a case-by-case basis, to require that a specific scenario (designed for but not otherwise required to be considered under paragraph 1 of subsection 10 (1)), be assessed to determine if it results in the highest POI concentration, if either:
 - A contaminant with acute effect is discharged during the operating conditions assumed in the scenario; or
 - The operating conditions assumed in the scenario occur frequently and discharge of any contaminant may result in a contravention or may cause an adverse effect.

Proposed regulatory amendments

Incident Modelling provision:

- New provision would allow the Director to order the preparation and submission of an ESDM report following a specific discharge to air (incident). The incident discharge would be modelled using actual operating data, emission rates, meteorological and local land use data for the time period of the discharge event.
- In addition to preparing an ESDM report, the Director would be able to require the submission of an assessment of all circumstances surrounding the discharge including the most likely cause of the discharge.
- To issue the incident modelling order, the Director would need to have reasonable grounds to believe the facility may exceed an air standard or the discharge of contaminants into the air may cause an adverse effect.