

ATMOSPHERIC DISPERSION MODELLING

Applicable legislations:

Certificates of Approval are required by Section 9 of the [Ontario Environmental Protection Act](#).

O. Reg 419 (Air Pollution - Local Air Quality).

Related Documents:

- Oak-01: ECA

Atmospheric Dispersion Modelling (Modelling) is usually performed to check compliance with air quality standards when applying for an Environmental Compliance Approval – Air and when creating an Emergency Preparedness Plans. Modelling is used to predict the down-wind contaminant concentration due to industrial discharge. Modern modelling programs often take into consideration, but are not limited to parameters like: wind velocity, wind direction, ambient temperature, stack elevation, building elevation, emission flow rate, terrain and receptor locations.

Recently, the MOECC has made changes to O. Reg 419/05, which has come into effect in 2010 and 2013. These changes require facilities whose North American Industrial Classification System (NAICS) code is in Schedules 4 and 5 of the regulation, to update their Modelling and Emission Summary Tables.

TARGET SECTORS FOR 2010

Item	NAICS Code	North American Industry Classification System Description
1.	2122	Metal Ore Mining
2.	221112	Fossil-Fuel Electric Power Generation
3.	324110	Petroleum Refineries
4.	3251	Basic Chemical Manufacturing
5.	3252	Resin, Synthetic Rubber, and Artificial and Synthetic Fibers and Filaments Manufacturing
6.	3311	Iron and Steel Mills and Ferro-Alloy Manufacturing
7.	331410	Non-Ferrous Metal (except Aluminum) Smelting and Refining
8.	Revoked: O. Reg. 516/07, s. 31.	

(From O. Reg. 419/05, Sched. 4; O. Reg. 516/07, s. 31)

TARGET SECTORS FOR 2013

Item	NAICS Code	North American Industry Classification System Description
1.	3221	Pulp, Paper and Paperboard Mills
2.	324190	Other Petroleum and Coal Products Manufacturing
3.	325	Chemical Manufacturing
4.	326150	Urethane and Other Foam Product (except Polystyrene) Manufacturing
5.	3279	Other Non-Metallic Mineral Product Manufacturing
6.	331	Primary Metal Manufacturing
7.	332810	Coating, Engraving, Heat Treating and Allied Activities ^{MEX}
7.1	332999	All Other Miscellaneous Fabricated Metal Product Manufacturing ^{MEX}
8.	336	Transportation Equipment Manufacturing
9.	5622	Waste Treatment and Disposal

(From O. Reg. 419/05, Sched. 5; O. Reg. 507/09, s. 36)

How Oakhill Can Help:

Oakhill Environmental has performed dispersion modelling for many clients. We also have carried out ALOHA (Areal Locations of Hazardous Atmospheres) modelling for emergency air releases.

In addition, Oakhill is qualified and able to provide the necessary updates to ensure your facility meets the requirements for the new O. Reg 419/05 requirements.

Dispersion Modelling Programs:

- O. Reg 346 model;
- AERMOD model;
- ALOHA; and
- CALPUFF.

Call Oakhill for a free no obligation quote and to inquire about your facilities O. Reg 419 compliance dates.

