

RATIONALE FOR DEVELOPMENT OF REPORTING THRESHOLDS

Introduction

The list of air contaminants for this emission reporting regulation was developed based on linkages to MOE domestic, transboundary and international environmental programs (such as MOE Air Standards/Guidelines, the MOE Air Standards Plan, the Great Lakes Commission (GLC), the Canada-Ontario Agreement (COA) Tier I and II, Electricity Sector Reporting, the Anti-Smog Action Plan, the Acid Rain Program, the Inhalable Particulate/Respirable Particulate (IP/RP) Program, the Climate Change Program and the Air Toxics Program) and the National Pollutant Release Inventory (NPRI). The list of air contaminants with reporting thresholds consists of 358 substances. The 268 NPRI substances share common reporting thresholds including 10 employees or more, 10 tonnes of substances manufactured, processed or otherwise used (MPO) or more, and lower release based thresholds for polycyclic aromatic hydrocarbons (PAH), polychlorinated dibenzodioxins (PCDD) and polychlorinated dibenzofurans (PCDF), hexachlorobenzene and mercury. In addition, the MOE has developed lower MPO thresholds for 79 substances not on the NPRI list.

The substance list was developed by a technical expert group comprised of staff from the Environmental Sciences and Standards Division, the Operations Division and the Integrated Environmental Planning Division.

The proposed regulation requires the reporting of emissions of substances if the thresholds are exceeded. The onus is on Ontario industrial, institutional, commercial and municipal sources to report their emissions to the public and respond to inquiries. Reasonable coverage of emission reporting [80% for toxics and 90% for criteria air contaminants (CAC)] is essential for MOE air programs.

Rules

1. A majority of the targeted contaminants have thresholds based on quantities manufactured, processed or otherwise used (MPO). By-products must be included in the calculation of the MPO reporting thresholds (tonnes or kilograms), even if they are at a concentration of less than one percent by weight. A facility must report its emissions if these MPO thresholds are exceeded.
2. For substances not covered by the NPRI, the MPO thresholds have been graded into three categories: 10 tonnes, 3 tonnes and 0.5 tonnes. These thresholds were developed with consideration of the relative toxicity of the contaminants.
3. Release based thresholds were assigned to CAC and global warming

contaminants.

4. NPRI has assigned alternate thresholds for year 2000 reporting to four substances, namely chlorinated dioxins and furans, hexachlorobenzene, polycyclic aromatic hydrocarbons and mercury.
5. A metal in the substance list refers to the metal and its compounds. Only the metal portion of the compounds emitted to the air are reported. Methyl mercury, nickel carbonyl, chromium (VI) compounds, tributyltin and methyl cyclopentadienyl manganese tricarbonyl (MMT) are reported separately from their respective metal compounds because they are more toxic. The thresholds of these organic metals and chromium (VI) compounds were given a threshold of 0.5 tonne/yr.
6. The thresholds for sulphur dioxides, particulate matter (PM), carbon monoxide and nitrogen oxides (expressed as NO₂) were set at 20 tonnes/yr (14 tonnes as NO) to target for a 90% capture of Ontario point source emissions. These thresholds are consistent with most U.S. jurisdictions;
7. The threshold for VOCs was set at 10 tonnes/yr to target for a greater than 90% capture of Ontario point source emissions;
8. The threshold for carbon dioxide was set at 100,000 tonnes/yr (this is consistent with reporting thresholds in U.S. jurisdictions);
9. The threshold for methane was set at 5,000 tonnes/yr in order to capture the emissions from large landfills.