Dioxins and Furans Canada-wide Standards for: Waste Incineration, Coastal Pulp and Paper Mill Boilers, Steel Manufacturing Electric Arc Furnaces and Iron Sintering Plants

2006 REVIEW

In June 2001, the Canadian Council of Ministers of Environment (CCME) endorsed Canada-wide Standards (CWS) for waste incineration and coastal pulp and paper boilers and in March 2003 for steel electric arc furnaces and iron sintering plants. The CWS for conical waste combustion of municipal waste was reviewed and supported in November 2003. These five CWS address sectors that accounted for 65% of the 1999 National releases to the atmosphere.

In 2003, reviews of the CWS for coastal pulp and paper boilers, iron sintering plants, and steel manufacturing electric arc furnaces were conducted taking into consideration any significant new available information, including technical reports for each sector, as well as emissions testing from the various sources. It was concluded by the Multi-stakeholder Advisory Groups (MAGs) that there was no new significant information to warrant a review of the three standards or a need for a new set of targets and timelines to continue progress toward virtual elimination. The next reviews for these sectors, and the incineration sector, are scheduled for 2006.

In preparation for the 2006 review of the standards, CCME conducted a scoping analysis for the review in which it examined the status of sectoral emissions, researched developments in alternate technologies and assessed the feasibility of implementing any new technologies identified for controlling emissions from waste incineration, coastal pulp and paper boiler, iron sintering, and steel manufacturing electric arc furnace sources. Based on this scoping work CCME decided to proceed as follows for each sector.

Coastal Pulp and Paper Mill Boilers:
Based on the review of emissions data and advances in technology published since the 2003 CWS review, CCME will not proceed with a review of this CWS in 2006:

- Emissions data shows that some facilities are struggling to meet the CWS target consistently.
- Economic constraints on the sector inhibits capital expenditures on pollution control technology by many mills.
- Research on new and emerging technologies is either premature, or not likely to add substantially to the current body of knowledge on these issues.

Steel Manufacturing Electric Arc Furnaces:
Based on the emissions data and advances in technology published since the 2003 CWS review, CCME will not proceed with a review of this CWS in 2006:

- No new pollution control technologies were identified for potential application to the EAF process for control of dioxins and furans emissions.
- Implementation of the pollution prevention measures identified in the pollution prevention strategy for this source to prevent or minimize the formation of dioxins and furans appears to be part of the driving force of the process design of new or modified EAF processes

Iron Sintering Plants:
Based on the emissions data and current technology for the iron sintering sector CCME will not proceed with a review of this CWS in 2006:

- Research and pilot testing has confirmed the addition of urea as an effective technique to suppress the formation of dioxins and furans and is planned for permanent installation at the sinter plant in Canada in early 2006.
- No new pollution control technologies were identified for application to the iron sintering process for control of dioxins and furan emissions.
- Annual emission data collected at the Stelco Hamilton sinter plant indicated compliance with the 2005 CWS.

Waste Incineration:
CCME will proceed with a review of this CWS in 2006:

- A review of current status of waste incineration plants indicates that most modern waste incinerator plants have used a combination of different air pollution control (APC) technologies to achieve good overall removal of atmospheric pollutants. Different facilities have used diverse combinations to this end, and as a result, a detailed review of the current technology combinations used at Canadian incinerators and the related performance is considered valuable.
- In addition, some APC technologies can create additional waste streams that require treatment prior to disposal, and documentation of this characteristic for the options in use is also felt to be worthwhile. Limited information was publicly available regarding current flue gas treatment and residuals (i.e. fly ash) treatment for Canadian waste incinerators.
- Confirmation and/or updating of the complete inventory of incinerators in Canada is required (including federal facilities and facilities on federal lands) including design capacity, current throughput, type, location, age etc.