

Canada-wide Standards for Dioxins and Furans Coastal Pulp and Paper Power Boilers Pollution Prevention Strategy

Context

The Canadian Council of Ministers of the Environment (CCME) signed the Canada-wide Standards (CWS) for emissions of Dioxins and Furans from Coastal Pulp and Paper Power Boilers in May, 2001. An important provision of the CWS is a commitment to develop pollution prevention strategies, consistent with the principles outlined in the *Canada-wide Environmental Standards Sub-Agreement*, that is:

Pollution prevention is the preferred approach to environmental protection. Governments will place emphasis on a pollution prevention approach when implementing standards under this Sub-Agreement.

CCME's definition of pollution prevention is as follows:

"The use of processes, practices, materials and energy that avoid or minimize the creation of pollutants and wastes at source."

The following is the text of the commitment incorporated in the Coastal Pulp and Paper Boilers Burning Salt-Laden Wood CWS for Dioxins and Furans:

Pollution Prevention Strategy

In addition to the continuing efforts of pulp and paper mill operators to capture emissions of dioxin and furans, emphasis will be placed on identifying and implementing opportunities to prevent the creation of dioxins and furans. A strategy identifying opportunities to eliminate the formation of dioxins and furans by the coastal pulp and paper industry will be developed through a multi-stakeholder process by December 31, 2001 to provide a framework for continual progress towards the elimination of dioxin and furans.

Recognizing that most opportunities for avoiding the creation of dioxins and furans fall beyond the exclusive influence of the coastal pulp and paper mill operators, preparation of this strategy must engage a wide range of stakeholders.

The range of issues to be addressed in developing the strategy could include:

- *maximum allowable salt content for hogged fuel*
- *removal of chloride from logs*
- *hogged fuel washing and pressing*
- *options for blending hogged fuel of different salt levels*
- *alternatives to log handling, transportation and storage practices that rely on salt water*
- *impacts of the length of time entailed in transportation and storage on the salt content of hogged fuel*
- *inclusion of transportation modes and effects in eco-certification criteria*
- *in-plant opportunities to avoid creation of dioxins and furans*

- *alternative fuel opportunities and costs*
- *providing greater opportunities for market intervention by improving the understanding of the costs being imposed on the pulp and paper mills by current log handling and storage practices*

The Coastal Pulp and Paper Multistakeholder Advisory Group (P&P-MAG) was asked to provide advice and input on the development of a pollution prevention strategy for coastal pulp and paper power boilers. The P&P-MAG is comprised of representatives of environmental non-government organizations, pulp and paper mill, forestry and industry association representatives, provincial environment department, and federal government environmental department.

As described above, the CWS pollution prevention strategy is to identify opportunities to minimize emissions of air pollutants from the coastal pulp and paper sector and provide a framework for continual progress toward the goal of virtual elimination of dioxins and furans. The Dioxins and Furans CWS Development Committee advised the P&P-MAG that a pollution prevention strategy is considered as a tool or advice for jurisdictions to consider and use in whole or in part.

Members of the P&P-MAG met regularly by teleconference and at a face-to-face meeting to discuss the range of issues. The Pulp and Paper Research Institute of Canada (Paprican) was commissioned to prepare an extensive paper entitled “*Investigations into the Variability and Control of Dioxin Formation and Emissions from Coastal Power Boilers*” to address potential approaches and technical options. The report is a thorough collection and examination of the currently available information on dioxin and furan formation and dioxins/furans prevention and control technologies and practices for coastal pulp and paper operations. The consultant’s report considered the pollution prevention issues in the above list. In addition, Pierce Lefebvre was commissioned to investigate alternative log movements and submitted a study entitled, *Study of Pollution Prevention Opportunities in the Coastal Forest Industry With Respect to Dioxins and Furans*”.

Paprican’s report identifies a number of pollution prevention practices and techniques that may be useful to jurisdictions and mill operators in reducing emissions of dioxins, furans and possibly other pollutants. However, ultimately, the study concluded that dioxins and furans can be most effectively reduced by replacing boilers that improve combustion conditions. However this requires significant capital investment beyond what has already been made. Pierce Lefebvre’s report concluded it was impracticable to devise a system of log movement that would avoid contact with salt water and therefore the formation of dioxins and furans.

Based on the studies and data available, the members of P&P-MAG reached agreement on the following:

- Based on knowledge gained from Paprican’s study and guidelines for each mill, mills should continue to work towards reducing emissions.
 - Mill specific recommendations have been forwarded to the coastal pulp and paper mill operators.
- The industry should continue to:

- Examine new technologies and operating practices (such as the use of auxiliary and additive fuels and trading wood waste fuel) to increase combustion efficiency and reductions in emissions. Trials of new technologies will be conducted in accordance with provincial requirements. Schedules of additional contaminants, which must be monitored in either stack or ash testing, will be developed in consultation with, and at the direction of the provincial environment ministry. Application of dioxin control technologies will take into consideration a net reduction of emissions.
- share emissions data and information with stakeholders and continue stakeholder involvement and input; and
- engage log and saw mills operators in seeking ways to address dioxin and furan formation.
- Paprican's report should be posted on the CCME website in both official languages, along with the attached context note;
- P&P-MAG should continue to meet, as a forum to support progress towards virtual elimination of dioxins and furans from coastal pulp and paper mills, through sharing of new information between members and progress made by mill operators in achieving emission reductions.



March 29, 2004

Krista Nakrieko
Canadian Council of Ministers of the Environment
360-123 Main St
Winnipeg MB R3C 1A3

Re: Canada-wide Standards Pollution Prevention Strategy for Coastal Pulp and Paper Boilers Burning Salt-Laden Wood

Dear Ms. Nakrieko:

On behalf of the Coastal Pulp and Paper Boilers Multi-stakeholder Advisory Group (P&P-MAG), I am pleased to forward recommendations to the Canada-wide Standards (CWS) Development Committee (DC) for Dioxins and Furans regarding the pollution prevention strategy for coastal pulp and paper boilers as required by the CWS for Dioxins and Furans from Coastal Pulp and Paper Boilers Burning Salt-Laden Wood.

As described in the CWS, the pollution prevention strategy shall identify opportunities to minimize emissions of air pollutants from the coast pulp and paper boiler sector and provide a framework for continual progress toward the goal of virtual elimination of dioxins and furans. The DC for Dioxins and Furans advised the P&P-MAG that a pollution prevention strategy should be proposed as a tool or advice for jurisdictions to consider and use in whole or in part.

The P&P-MAG members considered the recommendations contained in the report entitled, "*Investigations into the Variability and Control of Dioxin Formation and Emissions from Coast Power Boilers*", prepared by the Pulp and Paper Research Institute of Canada (Paprican). The report identifies a number of pollution prevention practices and techniques that may be useful to the coastal mill operators in reducing emissions of dioxins, furans and possibly other pollutants. Some practices and techniques will require further investigation, and not all identified practices will necessarily be applicable to all mills.

The committee also considered a study, entitled "*Study of Pollution Prevention Opportunities in the Coastal Forest Industry With Respect to Dioxins and Furans*", that provided a common understanding of how logs are transported, sorted and stored in coastal waters, assessed the associated costs of different modes of transportation, and identified the

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opportunities for avoiding contact with salt water. It concluded that the alternative forms of log movement to avoid the contact, and therefore the formation of dioxins and furans, were not practicable at this time.

Taking the above into account, the P&P-MAG members recommend to the DC that the following elements be considered for the pollution prevention strategy:

- Dioxins and furans can be reduced by improving combustion conditions in the boilers. Based on knowledge gained from Paprican's study and guidelines for each mill, mills should continue to work towards improving the conditions and therefore reduce emissions.
 - Boiler specific recommendations for each mill have been forwarded to the coastal pulp and paper mill operators.
- The industry should continue to:
 - Examine new technologies and operating practices (such as the use of auxiliary and additive fuels and trading wood waste fuel) to increase combustion efficiency and reductions in emissions. Trials of new technologies will be conducted in accordance with provincial requirements. Schedules of additional contaminants, which must be monitored in either stack or ash testing, will be developed in consultation with, and at the direction of the provincial environment ministry. Application of dioxin control technologies will take into consideration a net reduction of emissions.
 - Share emissions data and information with stakeholders and continue stakeholder involvement and input; and
 - Engage log and saw mills operators in seeking ways to address dioxin and furan formation.
- Paprican's report should be posted on the CCME website in both official languages, along with the attached context note;
- P&P-MAG should continue to meet, as a forum to support progress towards virtual elimination of dioxins and furans from coastal pulp and paper mills, through sharing of new information between members and progress made by mill operators in achieving emission reductions.

Please see the attached context note of the coastal pulp and paper CWS pollution prevention strategy for further information.

The above is respectfully submitted on behalf of P&P-MAG.

Sincerely,

Sohee Ahn
Chair, Coastal Pulp and Paper Boiler Multistakeholder Advisory Group

cc: Members of the Coastal Pulp and Paper Boiler Multistakeholder Advisory Group