

CROFTON AIRSHED CITIZENS GROUP

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The Burning Question – Just How Much Dioxins? Continuous Sampling for Coastal Pulp Mills

According to Canadian government data, BC is Canada's largest emitter of dioxins and furans, mainly from the pulp and paper sector. The use of salty hog by coastal pulp mills is well documented as a source of dioxin / furan air emissions and was the primary focus in the creation of the **Canada Wide Standards For Dioxin/Furan Air Emissions From Pulp Mill Boilers.**

Currently, to comply with Canada Wide Standards, pulp and paper facilities in British Columbia are required to conduct manual stack sampling, once per year over a period of a few hours under 'steady-state' conditions - implying ideal combustion conditions. It is well accepted that the majority of dioxin/furan emissions occur during conditions other than 'steady-state' in start-up, shut-down or otherwise upset conditions. There is currently no testing performed under such conditions.

For several years, local groups including Reach for Unbleached (RFU), Crofton Airshed Citizens Group (CACG) and Port Alberni Air Quality Council (AQC) have been deeply concerned about the levels of dioxins and organochlorines in pulp mill emissions due to the use of salty hog. CACG has identified the issue as a priority concern and the AQC has been researching the issue for a number of years.

In 2005, CACG convened a technical conference where AQC reported on the existence of the AMESA technology, a continuous stack sampling system. A project to install the AMESA system at the Crofton mill was identified by CACG as an

opportunity to get some real information on the dioxin levels in emissions.

- How do emissions vary due to normal daily and seasonal fuel changes?
- How do they vary due to typical combustion upsets?
- How do emissions vary due to scheduled and emergency shut-downs and start ups?

It appears these questions can be answered through the AMESA sampling system. The equipment presents a research opportunity to generate, for the first time in British

Columbia, accurate, long term dioxin emission data in relation to mill operation variables.

AMESA SAMPLING SYSTEM

The AMESA system (Adsorption Method for Sampling of Dioxins and Furans) is capable of continuous stack sampling for dioxins and furans, as well as a complete suite of other persistent organic pollutants (PoPs). In addition to the continuous stack sampling, there is an opportunity for short term

sampling for heavy metals – another unknown and largely unmeasured emissions parameter.

AMESA was adopted by Belgium in its waste to energy facilities after soil sampling proved that dioxin air emissions were significantly higher than had been reported using the standard annual testing regime. The units have been installed in over 50 facilities in Europe, are legally required in growing parts of Europe, and have been verified by the technical standards committee of the Stockholm Convention on Persistent Organic Pollutants for the European Commission.

"Due to their extraordinary environmental persistence and capacity to accumulate in biological tissues, dioxins and furans are slated for virtual elimination under the Canadian Environmental Protection Act (CEPA), the federal Toxic Substances Management Policy (TSMP) and the CCME Policy for the Management of Toxic Substances."

Canada Wide Standards for Dioxins and Furans, Endorsed by Canadian Council of Ministers of Environment, May 1, 2001

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CACG / RFU have proposed that significant funds held as proceeds from the Clean Air Concert be made available for the continuous dioxin sampling project provided that all of the conditions for their participation be met. These conditions are:

- full transparency and availability of data
- agreement on scope of project
- acceptance by all of methodology
- clear process in response to results

The projected cost of the AMESA system is, depending on a number of variables, approximately \$300,000 + on-site costs, including analysis. While CACG has funds to contribute to the project, they are insufficient to cover the entire cost of the research project.

Financial participation by other parties, such as Catalyst Paper and Environment Canada are necessary.

More importantly, the research project can only proceed when it is fully supported by the provincial and federal authorities that are responsible for emissions monitoring, compliance and enforcement. Environment Canada, as the

federal authority, and the British Columbia Ministry of Environment, as the provincial authority, are critical to the success of the project along with Catalyst Paper.

All parties involved with the exception of the federal authority responsible for emissions, Environment Canada, currently support the project.

Environment Canada holds federal responsibility for protection of the environment including monitoring, enforcement and reporting. As the lead agency of the Canadian Council of Environment Ministers that endorsed the Canada Wide Standards, EC is committed to the virtual elimination of dioxins and furans from coastal pulp mill power boilers. It is imperative that Environment Canada join both the local stakeholders, and the international community

in solving the mystery of dioxin emissions for the sake of environmental and human health surrounding coastal pulp mills. The public has a right to know their exposure to some of the most dangerous toxins known.

"stack dioxin emissions test results for the coastal power boilers are still highly variable. The results from single tests on any of the coastal power boilers vary by a factor between 5 and 45 and four of the 8 mills have measured emissions in the last three years that exceed the Canada Wide Standard for existing facilities (0.5 ng TEQ/m³@11% O₂). The large variations of individual test results present difficulties for many of the mills in ensuring compliance with the current CWS limit."

Paprican: 'Investigations into the Variability and Control of Dioxins Formation and Emissions from Coastal Power Boilers'

VOICE YOUR CONCERNS

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