



Gatineau, Quebec
K1A 0H3

November 20, 2003

To: Interested Parties
(Refer to Distribution List)

Re: Update on Sulphur in Fuel Oils

This letter is to provide you with an update on Environment Canada's initiative to reduce sulphur in heavy (industrial, HFO) and light (residential, LFO) fuel oils.

In April 2003, Environment Canada released a Discussion Paper entitled "*Setting Canadian Standards for Sulphur in Heavy and Light Fuel Oils*". This was followed by a multi-stakeholder workshop in Halifax on May 14 and 15, 2003. Over the summer, Environment Canada received 26 responses commenting on the issue. The comments came from a wide range of parties including federal, provincial and municipal governments, refining, electric power generation, steel, pulp and paper, and mining industries, and non-governmental organizations. In August, copies of the responses were distributed to interested parties in the "*Compendium of Stakeholders Comments*".

Environment Canada has reviewed the comments and notes that some key themes emerge from the submissions.

- In general, parties are supportive of SO₂ reductions; however, many stakeholders expressed concern with a focus only on sulphur in fuel oils given the approach to acid rain and SO₂ emissions in Canada whereby caps are put in place on a provincial level and managed by provinces. Most stakeholders expect SO₂ emission controls at large facilities, many of which use HFO, to play an important role in provinces meeting their caps. Environment Canada notes that emission reductions at smaller facilities without emission controls would not be achieved without use of lower sulphur fuel oils (or switching to a cleaner fuel).
- Several stakeholders addressed the use of bitumen emulsions as fuels for power plants and whether these should be included under this initiative. Bitumen emulsions are used in stationary facilities, have similar chemical characteristics to other fossil fuels, and result in emissions of air pollutants from combustion that are similar to emissions from combustion of HFO. Environment Canada recognizes that bitumen emulsions are not refined products and thus not a HFO. Further, recognizing that the present use of commercial bitumen emulsions in Canada is restricted to facilities with emission control systems, Environment Canada considers that such fuels should not fall within the scope of this initiative on fuel oils. However, if the situation changes and bitumen emulsions are used in facilities without emission control systems, Environment Canada will reassess its views on excluding bitumen emulsions from this initiative.



- Many parties are of the view that Canada should harmonize with the U.S. regional approach instead of the pan-national European Union standard. In the U.S., as a result of many state-by-state regulatory controls, two distinct grades of HFO are marketed: regular HFO (sulphur greater than 1% wt.), and low-sulphur HFO (sulphur less than 1% wt). Low-sulphur HFO accounts for 55% of sales in the U.S. northeast states. This trend is also true in Europe, where regular sulphur HFO can be used in emission-controlled facilities, but low-sulphur HFO is required in all other facilities. In Canada, where regulatory controls on sulphur in fuel oils exist, they are generally less stringent than the 1% wt. level specified by many U.S. states (and the E.U.) for low-sulphur HFO. Clearly, Canada is not presently harmonized with the U.S. regional requirements and measures to reduce sulphur in HFO would be required in order to harmonize.
- A number of stakeholders made the point that LFO and HFO are very different fuels with different users and different issues; they therefore recommended that the process should decouple these fuels. Environment Canada considers that this recommendation has merit, and will keep the point in mind as it develops the path forward for these two fuels. It is also noted that there is interest in the U.S. northeastern states for having sulphur levels in LFO identical to those in diesel fuel: i.e., 500 mg/kg or 15 mg/kg.
- Some stakeholders commented on the need to consider the regional nature of this issue. Environment Canada is aware that the supply of, demand for and access to alternatives to fuel oils vary across Canada. These regional differences will continue to be taken into account in our analysis.
- Numerous stakeholders pointed out that the data used in developing estimates of SO₂ emissions and potential reductions from lower levels of sulphur (i.e., based on the 1995 emissions inventory) were out of date and that analysis of more recent data was needed. Environment Canada expects to finalize and release to the public the emissions inventory for the year 2000 within 1 or 2 months.

Environment Canada's next step in examining measures for reducing sulphur in fuel oils is to review and analyze the more recent data as a next step in examining measures for reducing sulphur in fuel oils. This will provide more recent information on the amount of fuel oil used in facilities without SO₂ emission controls. The results will be shared with stakeholders. It is expected that the results will be available in the first quarter of 2004.

I would also like to take this opportunity to update you on the status of some of the other initiatives currently underway that may also assist in reducing SO₂ emissions from sources that use fuel oils:

- Under the Canadian Council of the Ministers of the Environment (CCME) Canada-Wide Acid Rain Strategy for Post-2000, Ontario, Quebec, New Brunswick and Nova Scotia are developing and implementing measures to achieve their new SO₂ emission reduction targets. Details on their plans and progress will be available in the latest



annual progress report on implementing the Strategy later this year at the CCME website: http://www.ccme.ca/initiatives/climate.html?category_id=31

- Under the Canadian Council of the Ministers of the Environment (CCME) the National Framework for Petroleum Refinery Emission Reductions is developing the principles and methods for jurisdictions to establish facility emissions caps for key air pollutants (including SO₂) from petroleum refineries (a significant user of HFO). Public consultations on this process will be initiated in Winter 2004. Further details can be obtained at: http://www.ccme.ca/initiatives/climate.html?category_id=69
- Environment Canada and Friends of the Earth have co-produced guides to help governments and other organizations take leadership by procuring low sulphur fuels, where available and feasible. Further detail can be obtained at: http://www.ec.gc.ca/energ/ecology/LSF/ecological_measures_e.cfm
- Environment Canada has also published the New Source Emission Guidelines for Thermal Electricity Generation in January 2003, which has limits for SO₂ emissions from coal-, oil- and natural gas-fired boilers.
- The final decision on the assessment of *Releases from primary and secondary copper smelters and refineries and Releases from primary and secondary zinc plants* was published in the *Canada Gazette* on September 28, 2002. Based on this assessment, SO₂ was declared toxic. A Toxics Management Strategy for Base Metals Smelters and Refineries has been developed and it proposes to address all toxic substances released by the sector including sulphur dioxide. Pollution Prevention Plans under section 56 of CEPA 1999, in conjunction with an Environmental Code of Practice under section 54, is the proposed approach.

These and other initiatives will be kept in mind as the work on sulphur in fuel oil continues. After Environment Canada has completed the review and analysis of the 2000 emissions inventory data, as noted above, we will be in touch with you regarding our next steps on this initiative. I look forward to working with all stakeholders as work continues on this initiative.

Yours sincerely,

Bruce McEwen
Fuels Division