

November 10, 2001

Mr. Brian Cameron, District Manager
Sudbury District Office
Ministry of the Environment
199 Larch Street, Suite 1101
Sudbury ON P3E 5P9

Sent by fax 705 564 4180

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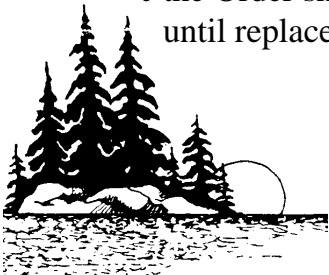
Dear Mr. Cameron:

**Re. Proposed Orders Under EPA Sections 7, 17 and 18 with respect to INCO Ltd.; and
Proposed Orders Under EPA Sections 7, 17 and 18 with respect to Falconbridge Ltd.**

The following comments apply to the proposed orders for controlling contaminant discharge, remedial work and preventative measures which were posted on the Environmental Bill of Rights electronic registry in September 2000 with respect to the operations of INCO Limited's smelter complex in the Town of Copper Cliff (EBR Registry Number IA01E1207) and Falconbridge Limited's smelter complex in the Town of Falconbridge (EBR Registry Number: IA01E1208). Except where otherwise noted, our comments apply equally and similarly to the two proposed orders, and the two operations.

In general, we view very positively any initiative to reduce the emission of sulphur dioxide and other contaminants from these operations. However, we are concerned that the proposed orders are too permissive, both in terms of time and measure. Our concerns are summarized in the following five points:

- C the proposed level of 0.34 ppm is too high; the order should be for immediate reduction to the regulatory limit of 0.25 ppm, with a longer term strategy to reduce below that level
- C the time allowed for the completion of a study to identify a technology and implementation is too long; the companies should be allowed a maximum of 2 years to complete the study, not the 9 years proposed
- C the time allowed for implementation of an SO₂ reduction plan is too long; the companies should be allowed a maximum of 4 years to implement the technology changes, not the 14 years proposed
- C the public notification system must be comprehensive
- C the Order should not have an expiry date of December 31, 2012; it should be in effect until replaced by a more rigorous order or until the reductions have been made



Levels for Sulphur Dioxide Release are Too High

The proposed order would require that INCO and Falconbridge reduce their SO₂ emissions from a level of 0.5 ppm permitted under the current control orders, which is double the level allowed under Regulation 337 of the Environmental Protection Act, to 0.34 ppm. While certainly an improvement over the extremely lenient control order currently in place, the proposal to allow these companies to continue to release SO₂ at an hourly average rate of 0.34 ppm is too permissive, and will not serve the presumed goal of protecting the people of Sudbury from the harmful effects of these emissions.

As noted in the draft order, the Ministry of the Environment has received a report advising that approximately 13,600 people in the City of Greater Sudbury (8.5%) are asthmatic; reducing the emissions levels is essential to their health and well being, to the health of the public in general and to the health of the natural environment.

Sulphur dioxide reacts with other chemicals to form very fine particles, which, once airborne, can lodge in the lungs and cause inflammation and damage to tissues. Recent studies have identified strong links between high levels of airborne sulphate particles and increased hospital admissions for heart and respiratory problems, as well as higher death rates from these ailments.¹ Recent studies in the United Kingdom have concluded that when hourly average concentrations of sulphur dioxide are in the range 125 ppb to 400 ppb - and so in general much lower than the recommended 0.34 ppm - asthmatics may experience symptoms including tightness of the chest and coughing and reductions in lung function when exposed to concentrations at the upper end of this range.² For long term exposures, sulphur dioxide levels above 0.15 ppm have been linked with increased hospital admissions for cardiac or respiratory diseases, and exposures to levels of 0.027 to 0.031 ppm with high levels of particulate matter have been associated with increases in respiratory illness in children.³ The Ministry of the Environment Report referred to in the draft control order concurs that exposure to SO₂ at levels in the range of 0.1-0.5 ppm and above for periods as short as 5 minutes can adversely affect asthmatic individuals.⁴

In addition to the deleterious effects on human health, high levels of SO₂ emissions are also harmful to the natural environment, resulting in plant stress, reduced growth, and damage to leaves and needles. Jack pine, considered a moderately sensitive species, has shown injury following a 2 hour exposure to 0.25 ppm; a one hour exposure at 0.25 ppm has been shown to injure begonias; a four hour exposure at the same level has damaged broccoli.⁵

Finally, it should be noted that the Ontario regulatory level of 0.25 ppm is very permissive when compared to other standards internationally, such as the limit of 100 ppb on a 15 minute average set by the U.K. Expert Panel on Air Quality Standards.⁶

In summary, the proposed level of 0.34 ppm is too high; the order should be for immediate reduction to the regulatory limit of 0.25 ppm, with a longer term strategy to reduce to a level of 0.1 ppm or lower.

Timelines Must be Shortened

While we support the timeline set for an initial reduction to 0.34 ppm by April 1, 2002, we are strongly of the view that the time allowed for the completion of a study to identify a technology and implementation is too long, as is the time allowed for implementation of an SO₂ reduction plan.

The companies have been operating at double the regulatory limit for an extended period of time, but have been - or should have been - well aware of the regulatory limit and of the impacts of their SO₂ emissions on human health and the environment. As noted in the draft order, INCO Ltd. has been engaged in a voluntary effort, albeit a failed one, since 1994 with respect to examining options to reduce their SO₂ levels. Further, INCO Ltd's Manitoba Division has been required to meet the 0.34 ppm limit for a number of years. In summary, the Companies have had adequate information and considerable lead time already. Furthermore, it does not take nine years to conduct a study, and it should not take an additional 5 years to implement technological changes identified in a study.

We strongly recommend that the companies be allowed a maximum of 2 years to complete the study, not the 9 years proposed, and allowed a maximum of 4 years (including the 2 years allowed for study) to implement the technology changes, not the 11 years proposed. The notion that the people of Sudbury would wait another 14 years to have SO₂ emissions reduced to the current provincial standard is simply unacceptable.

Public Notification System

We fully support the notion of the INCO and Falconbridge being required to implement a public notification system by December 31, 2001. However, the system put in place by December 31, 2001 should be a "trial" system, and the details and implementation of a comprehensive system should be worked out in consultation with the Local Medical Officer of Health and the City of Greater Sudbury as noted in the draft order, but there should also be a role for the general public and other interested parties. The notification system should include a number of components, including daily notice of air dispersal conditions which may result in SO₂ emissions reaching ground level, daily notice of the levels and constituents of emissions from INCO and Falconbridge's facilities, and a public warning system when emissions move into the range that could be harmful to human health, as discussed above. In developing the public warning system, INCO and Falconbridge should review the public warning system that has been in effect for the last several years in Flin Flon and Thompson, Manitoba, as well as in other locales. At

minimum, the public warning system must include radio announcements and direct notice to the health unit, health facilities, and area schools. Once the system is developed, it should be reviewed every 18 months to two years for effectiveness and ability to meet the public's needs and interests.

Expiry of the Order

We see no logic in including an expiry date of December 31, 2012, particularly given that the proposed timelines for study and implementation run until 2015. In our view, the Order should be in effect until replaced by a more rigorous order or until the reductions have been made. If, in the alternative, Regulation 337 will come into effect when the control order expires, we would support a more immediate expiry date.

Thank you for the opportunity to comment on the draft control orders for INCO and Falconbridge's SO₂ emissions. We regret that due to the limited comment period and a great number of other commitments, we have been unable to become more involved in the review of this important initiative prior to making this brief submission. We trust that our comments will be taken into consideration, and hope that we may have more opportunities for involvement in the near future.

Yours,

ORIGINAL SIGNED

Brennain Lloyd
Northwatch

ENDNOTES

1. Environment Canada Acid Rain Fact Sheet, http://www.msc-smc.ec.gc.ca/cd/factsheets/acidrain/index_e.cfm
2. Advisory Group on the Medical Aspects of Air Pollution Episodes, Second Report: Sulphur Dioxide, Acid Aerosols and Particulates. Department of Health.
3. Flin Flon and Sulphur Dioxide: Effects on People and the Environment. Manitoba Health, Manitoba Environment. Information Bulletin No. 95-30E. December 1995
4. Draft SO₂ Order, September 11, 2001, Item Section 1.10, page 2-3

5. Flin Flon and Sulphur Dioxide: Effects on People and the Environment. Manitoba Health, Manitoba Environment. Information Bulletin No. 95-30E. December 1995
6. Air Quality Monitoring: Data from Birmingham's Automatic Monitory Systems. Birmingham City Council Environmental and Consumer Services. May, 2001