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September 1, 2004

The Honourable Leona Dombrowsky
Minister of the Environment
12th Floor, 135 St. Clair Avenue West
Toronto, Ontario
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Dear Minister Dombrowsky:

Re: Comments on Ontario's Industry Emissions Reduction Plan: Proposal for a Nitrogen Oxides (NO_x) and Sulphur Dioxide (SO₂) Regulation (EBR# PA02E0031)

I offer the following comments (Attachment 1) on Ontario's *Industry Emissions Reduction Plan: Proposal for a Nitrogen Oxides (NO_x) and Sulphur Dioxide (SO₂) Regulation* ("Industry ERP"). The Industry ERP proposal would cap emissions of NO_x and/or SO₂ from seven industrial sub-sectors: petroleum, iron and steel, pulp and paper, glass, cement, carbon black and non-ferrous smelting. The proposal includes caps for 2006, 2007-9, 2010-14 and 2015 and beyond. It would also introduce the industrial sector to Ontario's existing emissions trading system for NO_x and SO₂.

In July 2004 I reported that in Toronto alone, air pollution contributes to an estimated 1,700 premature deaths and 6,000 hospitalizations each year. Clearly air pollution negatively affects health, and improving air quality in Ontario is a key step in preventing many respiratory and cardiac health problems, and health-care costs.

As a means of reducing pollutant emissions in Ontario, I support capping emissions from the industrial sector, and tightening those caps over time. This approach would complement the Province's commitment to improve air quality by phasing out coal-fired electricity generation in Ontario. Health and environmental organizations have called for the elimination of emissions trading between a capped sector (electricity) and an uncapped sector (industry). The industry ERP may help reduce this type of trading, by capping emissions from a number of industrial sub-sectors.

However, I do have concerns that the emission caps proposed for the industrial sector are not ambitious enough, particularly when coupled with the existing emissions trading program. Please find attached Toronto Public Health (TPH) staff's comments and recommendations on the

Ministry of Environment's (MOE's) June 2004 Industry ERP proposal. Previous comments dated February 16, 2003 by Toronto's Medical Officer of Health on the province's clean air plan for industry are also attached (Attachment 2).

I would be pleased to discuss these comments further with you or your staff.

Yours truly,

Dr. Barbara Yaffe
Acting Medical Officer of Health

Attached: Attachment 1. Detailed Toronto Public Health comments on June 2004 Industry Emission Reduction Plan
Attachment 2. Comments by Toronto's Medical Officer of Health on Ontario's Clean Air Plan for Industry. February 16, 2003.

cc: The Honourable Stéphane Dion, Federal Minister of the Environment
The Honourable Ujjal Dosanjh, Federal Minister of Health
The Honourable George Smitherman, Ontario Minister of Health and Long-Term Care
The Honourable Joe Cordiano, Ontario Minister of Economic Development and Trade
Gord Miller, Environmental Commissioner of Ontario
Lois Corbett, Policy Advisor, Ontario Minister of Environment's Office
Eric Loi, Senior Policy Coordinator, Air Policy and Climate Change Branch, Ministry of Environment
Councillor John Filion, Chair, City of Toronto Board of Health
John Warren, Director, Environmental Services, City of Toronto
John Wellner, Director, Environmental Program, Ontario Medical Association

Attachment 1

Detailed Toronto Public Health comments on June 2004 Industry Emission Reduction Plan

1) More ambitious NO_x caps are required

The NO_x emission caps proposed under the Industry ERP are not ambitious enough to ensure emission reductions, and would actually allow substantial emission increases. The initial caps for this sector are high relative to current emissions, and they decrease very slowly over time. Based on the following analysis, Toronto Public Health (TPH) cannot support the magnitude of the NO_x caps as proposed, and recommends that the MOE set more stringent emission caps that decrease more rapidly over time.

NO_x caps relative to current (2001) emissions:

The Industry ERP document released by the MOE, compares the proposed NO_x caps with current (2001) emissions for the same industrial sub-sectors. (Please see Table 1, below.) While the allowable emissions (caps) become somewhat smaller over time, the initial 2006 and 2007-2009 caps on Ontario industry emissions are so generous that they are actually higher than the current (2001) emissions. Capping emissions at the proposed levels could allow provincial emissions to increase over current levels by 10% in 2006. It is not until 2010-2014 that the caps become lower than current (2001) emissions, forcing a modest reduction.

It should also be noted that the allowable emissions of NO_x will likely be substantially higher than the caps stated in the Industry ERP, if emissions trading is allowed to proceed as proposed (please see below).

NO_x caps relative to provincial target:

Ontario has adopted a target of 45% NO_x reduction from 1990 levels from all sources, under the Anti-Smog Action Plan. In October, 2001, the Government of Ontario announced its intention to move the target date from 2015 to 2010. As shown in Table 1 below, the NO_x caps proposed under the Industry ERP will achieve an estimated 21% reduction in industrial NO_x emissions from 1990 levels by 2010. This is far short of the province-wide target of a 45% reduction from all sectors. As proposed, the Industry ERP would require Ontario to rely on other sectors, such as transportation, to make up for underachievement by the industrial sector. From a public health perspective, it is preferable that each sector be required to achieve the 45% reduction target, and any additional reductions by a particular sector be used to surpass the province's overall target.

Another means of assessing the emission caps is to ask how much progress has already been made toward the province-wide 45% reduction target, and how much more progress the caps stated in the Industry ERP would provide. Between 1990 and 2001, the industrial sector achieved a reduction of 17%, relative to 1990 emission levels. Therefore, to achieve the province's 45% reduction target, a further reduction of 28% is needed between 2001 and 2010

(i.e. 17% + 28% = 45%). In contrast, based on data provided in the Industry ERP, between 2001 and 2010 the province only proposes to reduce emissions by approximately 4%. Clearly this proposal would slow down progress on reducing industrial NO_x emissions, and it would fall short of the province-wide 45% reduction target. In order for the industrial sector to contribute its fair share to the Province's 45% emissions reduction target for NO_x, more ambitious caps are required.

Overall, the proposed NO_x caps would allow emissions to increase above current levels, and would not go far toward achieving Ontario's target. TPH recommends that the MOE reduce the proposed emission caps to a level that will ensure substantial emission reductions from the industrial sector.

Table 1. Industrial NO_x emissions in Ontario, for those sub-sectors that the MOE proposes to cap (kilotonnes of NO)

	1990 levels ^a	Current emissions (2001)	Proposed caps			
			2006	2007-2009	2010-2014	2015+
Petroleum	14	10.4	11.9	11.0	10.2	10.2
Iron & steel	15	12.7	12.8	11.8	10.9	10.9
Pulp & paper	12	6.8	6.9	6.5	6.2	6.2
Glass	2.1 ^b	2.1	2.1	2.0	1.8	1.8
Cement	19	19.7	20.3	18.6	16.9	14.8
New source set aside	n/a	n/a	3.1	3.1	3.1	3.1
TOTAL	62.1	51.7	57.1	52.9	49.0	46.9
Reduction to be achieved (kilotonnes below 1990 levels)		10.4	5.0	9.2	13.1	15.2
Reduction to be achieved (% below 1990 levels)		17%	8%	15%	21%	25%
Ontario-wide reduction target (% below 1990 levels)					45%	

Table 1 was produced from: MOE. June 2004. Ontario's Industry Emissions Reduction Plan, Table 2.

(a) 1990 NO_x values were added to the table, from: MOE. December 2002. Discussion Paper on Ontario's Clean Air Plan for Industry, Table 1.

(b) For the 1990 Glass sub-sector, the 2001 NO_x value was used, from: MOE. June 2004. Ontario's Industry Emissions Reduction Plan, Table 2.

Please note that the NO_x emission caps stated in the Industry ERP, and described above in the text and Table 1, do not acknowledge emission increases that would be permitted by the existing emissions trading system. The existing emissions trading system allows the electricity sector to exceed its stated NO_x emission cap by 33% by purchasing emission reduction credits from capped and uncapped emitters. More information is required on the province's proposed rules for emissions trading with the industrial sector. TPH hopes to learn that the substantial NO_x exceedances currently permitted for the electricity sector will not be allowed for the industrial sector. Please see below for more comments on emissions trading.

2) Progress is being made on SO₂ emission reductions, but there is a need to maintain momentum

Ontario adopted a target of reducing SO₂ emissions by 50% below the previous Countdown Acid Rain (C.A.R.) cap level of 885 kilotonnes. In October, 2001, the Government of Ontario announced its intention to move the target date from 2015 to 2010. Based on the caps proposed in the Industry ERP, it appears that the industrial sector would attain this target by 2007-2009 (Table 2).

TPH is pleased to learn that the caps will continue to decrease allowable SO₂ emissions beyond the provincial target. However, based on the caps proposed in the Industry ERP, progress on reducing industrial SO₂ emissions would slow until 2014. Based on MOE data provided in the Industry ERP, there was a 45% reduction in industrial SO₂ emissions between 1990 and the current time (2001). Between 2001 and 2010, the Industry ERP proposal would produce an additional reduction of 16%, indicating continued improvement, but at a slowed rate. More substantial reductions are then anticipated for 2015.

Reducing concentrations of sulphur compounds, and the particulate matter they form in the atmosphere, is essential to protecting health. In order to keep the current momentum on industrial SO₂ emission reductions, TPH recommends that the province update its SO₂ reduction target to a level that is more health-protective, and then set a path to achieve this more stringent target. Introducing incentives for over-compliance with emission caps is another method by which the province could encourage faster reductions by emitters and maintain the pace of emission reductions.

It should be noted (please see Table 2) that in the Industry ERP, the MOE reported the regulated limit (365 kilotonnes) for non-ferrous smelting in 2001. However, actual emissions were lower. Therefore it is possible that the proposed cap for 2006 could allow SO₂ emissions to increase, relative to actual 2001 emissions.

Table 2. Industrial SO₂ emissions in Ontario, for those sub-sectors that the MOE proposes to cap (kilotonnes of SO₂)

	Previous Countdown Acid Rain (C.A.R.) cap ^a	Current emissions & regulated limits (2001)	Proposed caps			
			2006	2007-2009	2010-2014	2015+
Petroleum		58.7	54.8	44.8	34.9	34.9
Iron & steel		18.5	19.0	17.8	17.2	17.2
Pulp & paper		7.5	7.6	6.6	5.8	5.8
Cement		21	22.2	21.2	19.6	15.7
Carbon black		9.5	11.0	10.4	10.7	10.7
Non-ferrous smelting		365 ^a	331	241	241	91
New source set aside		n/a	17.1	17.1	17.1	17.1
TOTAL	885	480.1	462.8	359.1	346.3	192.4
Reduction to be achieved (kilotonnes below previous C.A.R. caps)		404.9	422.2	525.9	538.7	692.6
Reduction to be achieved (% below previous C.A.R. caps)		45%	48%	59%	61%	78%
Ontario-wide reduction target (% below previous C.A.R. caps)					50%	

Table 2 was produced from: MOE. June 2004. Ontario's Industry Emissions Reduction Plan, Table 3.

(a) The column "Previous Countdown Acid Rain (C.A.R.) cap" has been added.

As noted above for NO_x, the Industry ERP's stated SO₂ caps, as quoted in the above text and Table 2, do not include the emissions increases that could be permitted through emissions trading. The province has stated its intention to apply the existing electrical sector emissions trading system to the industrial sector. This system allows the electrical sector to exceed its SO₂ cap by 10% through emissions trading, in part with uncapped emitters. TPH looks forward to more information on the province's plans for emissions trading in the industrial sector, including rules that will disallow the industrial sector from exceeding its caps. Please see below for more on emissions trading.

3) Improvements and information are required before adding the industrial sector to the existing emissions trading system

TPH recommends that improvements be made to the existing emissions trading (ET) program for the electrical sector, before this system is applied to industry. In addition, TPH requests that the MOE provide more detailed information on how this system would be applied to the industrial sector, and undertake further public consultation in this regard.

The Industry ERP document states that the industrial sector will be included in the NO_x and SO₂ ET program that is already in place for the electrical sector. However, the Industry ERP provides very little information on how the ET program might be applied to industry. The ET program for electricity allows emitters in Ontario to purchase “emission reduction credits” created by emitters that do not have pollution caps (emitters in uncapped sectors), and those as far away as Kentucky. As noted above, it also allows the electrical sector to exceed its stated caps by purchasing emission reduction credits (ERCs). If these two features of the existing ET program are applied to the industrial sector, actual emissions from this sector could rise above current emission levels, and negate the modest reductions described by the Industry ERP, especially for NO_x. Specifically, the electricity sector is permitted to buy ERCs to emit 33% over its NO_x cap and 10% over its SO₂ cap. The province has not yet indicated whether the industrial sector will also be permitted to exceed its caps, and if so by what percentage or tonnage.

TPH looks forward to more information and public consultation how ET rules will be applied to the industrial sector, before these rules are finalized. In previous letters regarding Ontario’s emissions trading system, Toronto’s Medical Officer of Health described in detail the need to prohibit trading between capped and uncapped sectors, and the need to tighten emission caps. With regard to the Industry ERP, TPH recommends that the MOE put in place a system of caps that will guarantee a dramatic net reduction in emissions of NO_x and SO₂, even when emissions trading is taken into account.

Currently, only trading of NO_x and SO₂ is being discussed with respect to the industrial sector. However, we take this opportunity to emphasize the need to prevent emissions trading of toxics, such as mercury, from being undertaken by any sector. Emissions trading can lead to areas of high local emissions and concentrations. For this reason, from a health perspective emissions trading can be of concern for any air pollutant, except for those compounds that have a truly global airshed and very low toxicity, such as carbon dioxide.

4) Electrical sector emission allowances for coal should be deleted to accommodate coal phase-out

TPH fully supports the Government of Ontario’s commitment to phase out coal-fired electricity generation by 2007 in order to improve air quality. The coal phase-out will dramatically reduce Ontario’s energy-related emissions of SO₂, NO_x, mercury, and other substances that have deleterious effects on health. Reducing Ontario’s emissions at home will also encourage jurisdictions upwind of Ontario to reduce their emissions, by demonstrating that dramatic emission reductions are attainable by phasing out coal.

As generating stations cease burning coal, and more sustainable methods are adopted to moderate and satisfy demand for energy, emissions of NO_x and SO₂ from the electricity sector will dramatically decrease. TPH recommends that Ontario's emission trading system be updated to reflect these changes before the industrial sector is added to the existing system.

Ontario's existing emission trading system for NO_x and SO₂ was designed under the assumption that Ontario's coal-fired power plants would continue operation. As coal-fired generation is phased out, and electricity sector emissions of NO_x and SO₂ decrease, the electricity sector's need for emissions allowances and emission reduction credits (ERCs) will decline to a fraction of current requirements. To accommodate Ontario's coal phase-out, the electricity sector's emission allowances should be reduced. Specifically, TPH recommends that those NO_x and SO₂ emission allowances that were provided to the electricity sector for its coal-fired electricity generating facilities should be permanently deleted from Ontario's emissions trading system. The exception is a very small number of allowances that could be used by the electricity sector to cover emissions from the cleaner forms of generation that are used to meet demand in the absence of coal.

Allowing the electricity sector to keep the coal-fired allowances would eliminate any meaningful cap on electricity sector emissions. If the industrial sector is added to the existing emissions trading system without first deleting the electricity sector's coal-fired emission allowances, the coal phase-out could flood Ontario's emissions trading market with cheap ERCs. In turn, this would create a disincentive for industry to invest in processes that actually reduce emissions, and the air quality and health value of the coal phase-out would be compromised.

Updating the existing emissions trading system to reflect the anticipated emission reductions from the energy sector would ensure that Ontario will reap the significant environmental and health benefits of the coal phase-out.

5) Revised NO_x metric is supported

TPH supports the proposed change in the Province's metric for nitrogen oxides (NO_x), from nitrogen oxide (NO) to nitrogen dioxide (NO₂). While the majority of NO_x is emitted as NO, the Government of Canada and the US EPA use NO₂ as the NO_x metric. In this regard, TPH supports harmonization with the federal government's metric. To improve public understanding and clarity, TPH requests that the MOE publicly release an explanatory table depicting quantitative limits for the four affected regulations, both in the old metric (NO) and in the new metric (NO₂).

6) Best Available Control Technology is preferred

Given the health importance of reducing emissions, and given industry's proven capacity to innovate, TPH believes that the Industry ERP should require Best Available Control Technology (BACT), instead of Best Available Control Technology - Economically Achievable (BACTEA). TPH acknowledges that there are some circumstances where an exception to the BACT

requirement may be justified, and BACTEA would be substituted instead. However, requiring BACT across the sector, with only occasional exceptions, would ensure that the sector was held to a higher standard of clean operation, while still providing a level playing field.