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Publication #78
ISBN# 978-1-77189-651-1

- MINORITY OPINION -

SUBMITTED TO THE TECHNICAL TASK FORCE REPORT ON THE USE OF CEMENT KILNS FOR THE DESTRUCTION OF LIQUID POLYCHLORINATED BIPHENYLS (PCBs)

filed

by the

CANADIAN ENVIRONMENTAL LAW ASSOCIATION

and

POLLUTION PROBE

October 3, 1979

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I. INTRODUCTION

In February 1979, the Canadian Environmental Law Association, and Pollution Probe, two environmental groups with a combined total of nearly two decades of involvement in matters pertaining to environmental policy and law, resource management and environmental education were asked by Environment Canada to sit as members of the Technical Task Force investigating the burning of PCBs in cement kilns. Because of the importance of the matter being investigated both CELA and Probe agreed to sit on the Task Force, subject to certain conditions.

While both CELA and Probe commend the federal and provincial governments for undertaking initiatives respecting PCB disposal we find that we must file a minority opinion to the final Task Force report. This decision is taken because of:

1) the failure of the Task Force to deal with the question of alternatives to the burning of PCBs in cement kilns; and

2) the failure of the Task Force to adequately deal with the question of whether expected PCB emissions and other losses associated with the cement kiln process are consistent with notions of environmental health and safety.

The supporting discussion for these two points follows.

II. FAILURE OF THE TASK FORCE TO DEAL WITH THE QUESTION OF ALTERNATIVES TO THE BURNING OF PCBs IN CEMENT KILNS

It is submitted that the soundness of the decision to burn PCBs in cement kilns can only be evaluated when it is compared with other options. The failure of the Task Force to undertake a vigorous investigation of appropriate alternatives is a critical omission in an environmental decision-making process which compels our filing a minority opinion to the final Task Force report.

It is clear from the Task Force report itself[1] and background ministerial statements[2] that the federal government, through its own prior work and the submissions of the council of resource and environment ministers as well as industrial associations had already determined that cement kilns could be promoted for the burning of PCBs. Thus, the Task Force was basically engaged in writing what might broadly be described as a "how to" manual on PCB burnings in cement kilns. This is also confirmed by its terms of reference which are limited to establishment of siting and burning criteria for cement kilns.[1,2]

Moreover, this promotion occurs notwithstanding the pending investigations by an Ontario Commission of Inquiry which is charged with considering "whether", not merely "how", PCBs could be burned safely at the St. Lawrence Cement kiln

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1. Environment Canada. Report of the Technical Task Force on the Use of Cement Kilns for the Destruction of Liquid Polychlorinated Biphenyls. September 1979. Page 1.

2. Environment Canada. Press Release and Background Statement. "Marchand Announces Plan for Destruction of Polychlorinated Biphenyls". Ottawa. January 11, 1979.

in Mississauga.[3] Ironically, this is the same cement kiln from which the Task Force has derived much of its information base. Of what technical value will the Task Force's "how to" manual be, if the likely more vigorous commission inquiry were to determine, on technical and/or related grounds, that cement kiln burnings of PCBs at the St. Lawrence Cement facility are not in the public interest? Will the Task Force be able to claim to have conducted a more searching investigation, where all assumptions were adequately tested? We submit that this would be doubtful given the Task Force's tight time constraints and collegial nature.

Unfortunately, there are ties that bind both the Task Force report and the Commission of Inquiry to less than complete environmental review. Both the Task Force and the Commission have terms of reference that preclude examination of alternatives.[4] In the case of the Task Force report we have one paragraph which mentions alternatives. These are presumably dismissed on the basis of one slim Ontario Ministry of the Environment document[5] which discusses seven alternatives in fifteen pages; all unfavourably in comparison to cement kiln burnings, not surprisingly. Yet the level of examination found in the MOE report is especially disappointing when coming from a province where the notion of comprehensive evaluation of alternatives has long been regarded as enlightened policy[6] as well as law.[7]

Indeed, the MOE document raises more questions than it answers. Any decision-maker would have to be very cautious in basing a decision on the information contained in the MOE document because in many instances sources upon which its conclusions are based are not disclosed. Other problems with the MOE report include:

1) it appears to set up "straw men" alternatives (land disposal);[8]

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3. Order-in-Council No. 449/79 establishes the Environmental Assessment Board as a Commission of Inquiry under The Public Inquiries Act, 1971 to inquire into the burning of PCBs at St. Lawrence Cement Company, City of Mississauga.

4. Supra, footnote 1, page 4.

5. Ontario Ministry of the Environment. Analysis of Alternatives. April 25, 1979.

6. See, for example, V.W. Rudik, Assistant Director, Environmental Approvals, MOE, "Green Paper on Environmental Assessment in Ontario". A paper presented to the Pollution Control Association of Ontario, Toronto, April 1974. See especially pages 2, 4 and 15 on the role of alternatives in environmental decision-making.

7. The Environmental Assessment Act S.O. 1975, chapter 69 as amended. Section 5.

8. Supra, footnote 5, page 1. Landfilling of liquid PCBs would appear to be as contrary to long-stated Ontario government policy as landfill disposal of toxic and hazardous wastes generally. Indeed even this document indicates that no agency favours this approach. Certainly, the public would agree based on its experience with landfill sites such as Upper Ottawa Street in Hamilton, Ontario. Why then include it as an alternative for discussion at all? If a review of alternatives deals with undesireable choices, then any proposal (e.g. cement kiln burns) could be made to look better than alternatives presented.

2) it appears to downplay technically feasible and available but commercially premature methods without dealing with the key question of whether these methods could be environmentally safer or more destruction efficient of PCBs than cement kiln burns (e.g. microwave plasma detoxification, plasma arc pyrolytic destruction);

3) it appears to use arguments against alternatives which ironically seem equally applicable to the use of cement kilns (high temperature incinerators).[9]

In sum, the Task Force's failure to deal satisfactorily with the issue of alternatives, requires us to ask whether such alternatives either alone or in combination (perhaps even with a reduced level of cement kiln burning should it be shown to be appropriate) would not provide a higher degree of PCB destruction in an environmentally safer manner. We submit that because the process associated with a comprehensive and detailed canvassing of alternatives was not undertaken, the Task Force cannot determine whether cement kiln burns adequately address the question of environmental health and safety relative to all other alternatives.

III. FAILURE OF THE TASK FORCE TO ADEQUATELY DEAL WITH THE QUESTION OF WHETHER EXPECTED PCB EMISSIONS AND OTHER LOSSES ASSOCIATED WITH THE CEMENT KILN PROCESS ARE CONSISTENT WITH NOTIONS OF ENVIRONMENTAL HEALTH AND SAFETY

The Task Force report concludes in several places that cement kilns may be used for the "destruction of PCBs" or that "a very high degree of destruction of PCBs" can be expected from the use of cement kilns.[10]

In postulating "worst case" scenarios, based in large part on work done at St. Lawrence Cement, Mississauga, the report indicated that 1-2 grams per hour would be the calculated emission rate from the kiln exhaust.[11] Uncertainties are said to remain due to the "limits of detectability of the methods of sampling and analysis" currently available. It further notes that "the magnitude of the emission of unburned PCBs from the exhaust stack must certainly be secondary to those that could conceivably result from unforeseen failure of systems and equipment used for the storage, transfer and destruction" of PCBs.[12]

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9. Supra, footnote 5, page 16. Potential problems associated with high temperature incineration are said to include: the escape of unburned PCBs on start-up or shutdown; chloride build-up; disposal of scrubber effluent and the need for blending. However, all of these problems appear to apply to the use of cement kilns as well, based on Task Force discussions and a reading of the Task Force report itself. Yet the MOE report curiously concludes "These problems are not encountered with cement kilns and are part of the reasons for promoting their use."

10. Supra, footnote 1. See, for example, pages 6 and 35.

11. Ibid. Page 7. According to information supplied by the Task Force Chairman, this would result in an emission of 3.7 kg over 22 weeks during the destruction of 667,000 kg of PCBs. (This amount is taken from Table 1 of the Task Force report for currently available quantities of PCBs from Ontario.)

12. Ibid. Page 35.

A key question that appears unanswered, however, is whether such emission rates, along with other accidental released of PCBs, in one location (e.g. the Mississauga area, site of St. Lawrence Cement) for 40 years (the current estimated life of equipment using PCBs and still so authorized) are consistent with environmental health and safety for that local population and environment?[13] The Task Force report itself tells us that PCBs are suspected carcinogens.

The following exchanges between CELA and the Task Force Chairman at the May 1, 1979 sitting of the Task Force outline the current uncertainties:

Q.37. Would the levels created in the ambient air by these releases be "safe" for human health and the environment?

A. I have been advised that generally speaking the dilution factor that can be applied to such systems is about 10,000. That is to say, that if the emission rate is 3 micrograms per cubic metre (3,000 nanograms), the expected ambient concentration level is very much below currently measured ambient levels.

The question as to whether or not such levels are "safe" cannot be definitively answered at this time. It will be necessary for the regional committees to examine the currently available health related information that is now being assembled and make their own judgements.

Q.40. How much more PCBs in kg. would errors, e.g. waste fuel destruction failure, add per year (to the environment)? Over 40 years?

A. I have no answer at this time, but this is one reason that Environment Canada will be funding a contract for the development of a risk assessment methodology particular to the destruction of liquid PCBs in a cement kiln. Using the developed methodology, the regional committees will be able to apply the specifics of their situation, and make estimates of the probabilities and extent of such failures.

IV. CONCLUSIONS

The Task Force can, of course, respond that to do nothing with current PCB wastes in storage and elsewhere is to risk serious contamination problems with a larger population over a wider geographic area. This is a legitimate concern. But it also begs the question as far as a sound decision-making process is concerned. We are not advocating the doing of nothing. Rather we submit that the public interest requires an affirmative answer to the question "Was every viable option subjected to thorough scrutiny before a particular course of action was adopted?" It is a simple test of looking

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13. Ibid. Page 4.

before you leap; of checking and double-checking one's homework. Where the issue is environmental safety, or even relative environmental safety, we submit government can do no less.

All of which is respectfully submitted.

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October 3, 1979