HALOGENATED SOLVENTS INDUSTRY ALLIANCE, INC.

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October 14, 2003

Mr. James Riordan
Executive Director
National Office of Pollution Prevention
Toxics Pollution Prevention Directorate
Environmental Protection Service
Department of the Environment
Ottawa, ONT K1A 0H3
Canada

Re: Virtual Elimination List, Proposed Addition of Hexachlorobutadiene, Canada Gazette, Part 1, August 16, 2003

Dear Mr. Riordan:

The Halogenated Solvents Industry Alliance, Inc. (HSIA) represents manufacturers of chlorinated solvents including two products, trichloroethylene and perchloroethylene, that would be affected by the proposed addition of hexachloro-butadiene (HCBD) to the Virtual Elimination (VE) List established by section 65 of the Canadian Environmental Protection Act of 1999 (CEPA 1999). HSIA opposes the addition of HCBD to the VE List and wishes to file a notice of objection requesting that a board of review be established under section 333 of the Act. HSIA's objection is based on the following factors:

- The availability of new information concerning the prevalence of HCBD in the environment indicating that the Department already has achieved virtual elimination of the substance.

- The absence of established protocols for (i) determining a limit of quantification (LoQ) for a substance added to the VE List under section 65.1 of CEPA 1999, and (ii) developing a "release limit" for such substances under subsection 65(3) of the Act.

Availability of New Information

The February 2001 PSL Assessment Report concludes that HCBD should be considered "toxic" per subsection 64(a) of CEPA 1999 because the substance "is entering the environment in a quantity or concentration or under conditions that have an immediate or long-term harmful effect on the environment or its biological diversity." The Assessment Report concludes further that the presence of HCBD does not constitute a danger to human life or health and does not constitute a danger to the environment on which life depends. The designation as toxic under subsection 64(a) is the result of the determination that HCBD "poses a risk to benthic organisms in the most contaminated portions of the St. Clair River."

The Assessment Report, moreover, indicates that –

- HCBD has not been detected in samples of outdoor air from 46 sites across Canada since 1994.

- HCBD was not detected in 24 samples of agricultural soils from across the country or in 6 samples from areas that had repeatedly received heavy applications of pesticides.

- HCBD has not been detected in drinking water in provincial monitoring programs outside of Ontario. In Ontario, HCBD was detected in only 5 of 2,994 samples (0.17 percent) colleted between 1991 and 1995. The highest concentration measured in these samples was 20 times lower than the Estimated No-Effects Value (ENEV) presented in the Assessment Report.

- The highest level reported in Canadian surface water in 1994 was two orders of magnitude below the ENEV and "500-fold" lower than levels found in the same area a decade earlier.

More recent data available from Canada and Sweden indicate that ambient levels of HCBD have continued to decline since the PSL assessment was completed. According to data collected as part of the Swedish National Environmental Monitoring Programme and reported to the United Nations Economic Commission for Europe (UN-ECE), background levels of HCBD in the air varied from 2 to 5 picograms per cubic meter (pg/m^3) in 1999 and 2000.[1] These data suggest a 99-percent reduction in ambient levels since the mid 1980s.[2] In Canada, data collected by the Department's Ecosystem Health

[1] Hexachlorobutadiene, Dossier prepared for Ministry of Housing, Physical Planning and the Environment in the framework of the U&N-ECE Ad-Hoc Expert Group on POPs, Ministry of VRPOM/DGM, February 2002.

[2] Class and Ballschmiter, 1987, Fresenius Z. Anal. Chem. 327: 198 – 204.

Division indicate that levels of HCBD in the sediments and suspended solids of the Niagara River have continued to decline since their peak in the 1960s and now average less than 10 nanograms/gram (ng/g).[3]

Most importantly, however, recent information provided by the Department indicates that the source of HCBD contamination in the sediments of the St. Clair River has been "completely remediated and decommissioned."[4] As a result, the Department has concluded that the sole basis on which HCBD was declared "toxic" under subsection 64(a) of CEPA 1999 has been remediated to the extent that "no further action" is required under its proposed risk management strategy for HCBD.[5]

Subsection 90(2) of CEPA 1999 provides for the deletion of a substance from the List of Toxic Substances in Schedule 1 if its inclusion is no longer necessary. As part of this decision, any regulations made under Section 93 would be repealed. Since the Department currently is developing regulations to establish release limits for HCBD, it is an appropriate time to consider the merits of continued listing of HCBD in Schedule 1.

Absence of Protocols for Implementing Section 65.1 and Subsection 65(3) of CEPA 1999

It is HSIA's understanding that HCBD would be the first substance to be added to the VE List under subsection 65(2). According to the proposed notice, the criteria for adding a substance to the VE List are that the substance (i) is declared toxic under Section 64, [6] (ii) meets the criteria of the Persistence and Bioaccumulation Regulations, (iii) is present in the environment primarily as a result of human activity, and (iv) is not a naturally occurring substance. Although the criteria for VE listing under section 65 are clear, the protocols for the resulting establishment of an LoQ under section 65.1 and release limits under subsection 65(3) are not. This is of great concern because these sections of CEPA 1999 contain a number of terms that are subject to interpretation. Section 65.1, for example, defines the LoQ as "the lowest concentration that can be accurately measured using sensitive but routine sampling and analytical methods." [emphasis added] Subsection 65(3) indicates that the Department shall consider "any other relevant social, economic or technical matters" in setting release limits for substances on the VE List. Although Department staff have indicated their intent to hold discussions on the general implementation issues related to section 65 of CEPA 1999,

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3 Williams et al, 2000, The Niagara River Upstream/Downstream Program 1986/87 – 1996/97, Report No. EHD/ECB-OR/00-01/l.

4 Hexachlorobutadiene (HCBD), Proposed Risk Management Strategy, November 15, 2002.

5 At the first stakeholders meeting held on December 9, 2002, Environment Canada staff suggested that an updated assessment of HCBD may conclude that the substance no longer meets the criteria for designation as toxic under subsection 64(a).

6 As indicated above, recent data suggest that HCBD would likely not be declared toxic if the Department were to conduct an updated assessment of the substance.

those discussions will not occur in time to impact the listing of HCBD. As a result, parties without a specific interest in HCBD are unlikely to provide important input on issues related to the LoQ and release limits as they apply to this substance and ultimately may apply to all substances subsequently added to the VE List.[7]

HSIA is particularly concerned about the proposed LoQ for HCBD and the Department's interpretation of "routine" analytical methods under section 65.1. As part of its discussions with Environment Canada, HSIA submitted samples of chlorinated solvents from its member companies for HCBD analysis using a methodology developed by the Department's analytical laboratory.[8] HSIA also conducted its own trace analysis of the chlorinated solvents at a laboratory in Texas using a modified version of the Department's method. Although the results from the two laboratories are similar, HSIA did not achieve the same level of sensitivity. (A comparison of the two sets of results is enclosed.)

To the best of HSIA's knowledge, the Department's facility is the only laboratory in Canada that has performed an analysis for HCBD in the solvents. The Department has not conducted round-robin testing of their methodology with other labs in the country, and has not confirmed that the LoQ they propose can be duplicated elsewhere. In fact, HSIA's laboratory encountered considerable problems with the concentration step in the Department's method that is necessary to achieve the lower quantification limit.

Neither the Department's methodology nor the modified method used by HSIA's laboratory, moreover, can be considered routine, if one interprets the language of section 65.1 to mean that the method must be "off the shelf." Even the modified analysis conducted by HSIA's contract laboratory required the facility to conduct a significant amount of development work prior to analyzing the samples. Assuming the authors of section 65.1 intended something other than a literal meaning of the term "routine," a number of issues must be addressed prior to establishing an LoQ for HCBD, including questions about method verification, geographic availability, and types of equipment required. HSIA strongly believes that these and other questions must be resolved prior to a decision on the addition of HCBD to the VE List.

Section 91 of CEPA 1999 sets out an aggressive 2-year timeline for the development of regulations following the addition of a substance to Schedule 1. HSIA is very concerned that the Department's efforts to meet this timeline have caused it to compromise the scientific integrity of the VE listing process and the development of LoQs, both generally and specifically with respect to HCBD. We believe that the support

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[7] This concern is compounded by the fact that notification of the proposed VE Listing and LoQ for HCBD was not distributed until mid September, nearly halfway through the 60-day comment period.

[8] Determination of Level of Quantification for Measuring Hexachlorobutadiene in Chlorinated Solvents, Environment Technology Centre, Environment Canada, Draft 1 (February 2001).

for addition of HCBD to the VE List is equivocal and that the approach taken to establishing the LoQ and release limits for the substance are not supported by the available information. We are concerned, in addition, that the process used for HCBD will establish a precedent for consideration of other Schedule 1 substances prior to a general debate on the criteria to be used for VE listing.

Because of these concerns, we strongly encourage the Department to postpone its efforts on HCBD until a review board has addressed the important general issues surrounding the VE listing process.

Sincerely,

Stephen Risotto

Stephen P. Risotto
Executive Director

Enclosure