BSEF
Bromine Science and Environmental Forum

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Office of Pollution Prevention and Toxics
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, DC 20460

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ATTN: TSCA Section 8(e) Coordinator

RE: TSCA Section 8(e) Notification on Hexabromocyclododecane (HBCD)
[CAS No.: 25637-99-4]

Dear TSCA 8(e) Coordinator:

8802000152

The Bromine Science and Environmental Forum (BSEF) submits this letter of substantial risk notification in accordance with Section 8(e) of the Toxic Substance Control Act, 15 USC 2607(e), and the Environmental Protection Agency's "Statement of Interpretation and Enforcement Policy" thereof 43 FR 11110 (March 16, 1978). The members of BSEF include Albemarle Corporation, Ameribrom, Inc. - Dead Sea Bromine Group and Great Lakes Chemical Corporation.

Part V(b)(2) of the Guidance in essences states that measurements and indicators of pronounced bioaccumulation shall be reported to the EPA when they are coupled with the potential for widespread exposure and any non-trivial adverse effects. Industry previously notified EPA that HBCD bioaccumulates. However, the results of the draft report of an environmental monitoring study performed in Europe are indicative of bioaccumulation and that HBCD may have the potential for widespread exposure in the environment. No non-trivial adverse effects were noted.

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The study was commissioned by BSEF and performed by the RIVO-Netherlands Institute for Fisheries Research. The study analyzed samples collected in Europe from the aquatic environmental (sewage sludge, sediment and biota) for HBCD. The samples were analyzed for the three distereomers (gamma, alpha and beta) present in the commercial product using high performance liquid chromatography - mass spectrometry (HPLC-MS). The predominant distereomer of the commercially manufactured HBCD is the gamma with the ratio being gamma >> alpha > beta. The gamma distereomer tends to

BSEF • Bromine Science and Environmental Forum
Avenue de Cortenbergh, 118 • 1000 Brussels • Belgium • Phone 32 2 733 93 70 • Fax 32 2 735 60 63
• websites www.bsef.com • www.firesafety.org
• E-mail mail@BSEFsecr.com

be the predominant HBCD distereomer reported in sediment, while in sewage sludge both the gamma and alpha were usually reported, and often at near equal concentrations. In the case of biota (i.e. invertebrates, fishes, birds, marine mammals), the alpha was typically the predominant distereomer.

The results and conclusions of this European study indicate that HBCD, in addition to pronounced bioaccumulation, has the potential for widespread exposure in the environment. However, there have not been any non-trivial adverse effects noted or reported in direct association with either of these factors. In a previously performed fish bioconcentration study, no adverse effects were noted despite bioaccumulation. In addition, the No-Observable-Adverse-Effect-Levels (NOAELs) of HBCD in both a 28- and a 90-day mammalian toxicity study were 1,000 milligrams per kilogram–day.

If you have any questions, please feel free to contact me at (765) 497-6319.

Sincerely,

David Sanders/Sam

David Sanders, Ph.D.
Chairman

JAB/jab