



**United Nations
Environment
Programme**

Distr.: General
28 August 2006

English only

Stockholm Convention on Persistent Organic Pollutants
Persistent Organic Pollutants Review Committee
Geneva, 6–10 November 2006
Item 5 (a) of the provisional agenda*
Consideration of draft risk profiles: pentabromodiphenyl ether

Comments and responses relating to the draft risk profile on pentabromodiphenyl ether

Note by the Secretariat

The draft risk profile on pentabromodiphenyl ether, prepared during the intersessional period by the working group established by the Committee for this purpose, is set out in document UNEP/POPS/POPRC.2/7. The annex to the present note contains a table listing the comments received in accordance with the standard workplan for the preparation of a draft risk profile and responses to those comments by the working group. The annex was prepared by the working group and has not been formally edited.

* UNEP/POPS/POPRC.2/1.

Annex

Comments and responses relating to the draft risk profile on pentabromodiphenyl ether

Minor grammatical or spelling changes have been made without acknowledgment. Matters of substance are detailed below.

Risk Profile Section	Source of Comment	Comment	Response
Executive Summary	Canada	Different acronyms should used for the chemical under consideration, mixture components, and the generic class of bromo-diphenyl ethers	The decision on Annex D was in respect of the commercial mixture PentaBDE. This acronym has been adopted, along with PBDE (meaning all congeners). Specific congeners are identified by their international code numbers, such as BDE-100. Change also adopted in Section 1.1.
Executive Summary	Canada	Suggested replacement of 'volatile' by 'sufficiently volatile'.	Change accepted.
Executive Summary	Canada	Suggested sentence on trends provided.	Sentence included.
Executive Summary	USA	Suggested addition of information about production.	Small change made to sentence, but details placed in Section 2.1.
Executive Summary	USA	Attention drawn to the fact that uses in electrical and electronic goods were minor, and that only workplace exposure results form dismantling and recycling operations.	Text changed to reflect this information.
Executive Summary	USA	Recommended that a clause be added that 'effort should be made to obtain' further information.	Not felt to be appropriate in a risk profile, and in any case such uses will cease as production is phased out.
Executive Summary	USA	Suggested change to 'potential sources'.	Change adopted.
Executive Summary	USA	Suggested deletion of comparison of animal NOELs and observed human concentrations on grounds of inadequate knowledge of linking data.	No deletion, but text augmented to highlight the uncertain status of such comparison.
Section 1	Canada	Question raised over need for general statement.	Statement abbreviated.
Section 1	Canada	Question raised whether the Annex D decision referred to commercial product or single congener.	Question answered above. Information included in Executive Summary and Section 1.2.
Section 1	USA	Suggested addition of text on harm depending on persistence and accumulation.	Suggested change has been met by rewriting of text in this section.
Section 1.1	USA	Comment that Penta is not an isomer but a commercial mixture.	This has been clarified in new text dealing with acronyms and code numbers.
Section 1.1	USA	Comment on homologues and congeners.	The term 'congener' has been preferred in the risk profile.
Section 1.3	Canada	Suggested that 'EPA' be spelled out.	Changed to 'environment protection agencies'.
Section 1.3	USA	Suggested reworking of text in second paragraph.	Text reworked to give positive not negative account and to delete country names for the sub-categories.
Section 2.1	USA	Uncertainty about what 'total' is intended in Table 1.1	

Section 2.1		Calling this Table 1.1 seems inappropriate.	Changed to Table 2.1, and consequent changes made to other table numbers in Section 2.
Section 2.1	USA	Comment on relative importance of use in electrical and electronic goods.	Comparative comment added to text where uses in Asia discussed.
Section 2.1	USA	Query on China production.	Data for China included in text immediately below Table 2.1.
Section 2.1.1	USA	Information about production.	Incorporated in text.
Section 2.1.1		Information about production in China.	Incorporated in text.
Section 2.1.1	Canada	Suggested addition of new information on imports into Canada.	Suggested paragraph added.
Section 2.1.2	Canada	Suggested addition of new material on poly-urethane foams.	Two new paragraphs added and one extended.
Section 2.1.1	USA	The absence of data house dust is noted and request made for inclusion of such information.	A new paragraph added, replacing the note inserted in the draft at this position. Data are cited for a 2004 study in the US and the reference given.
Section 2.2.1	Canada	New material provided on biodegradation of BDEs.	Two new paragraphs added.
Section 2.2.1	USA	Comment that no information is provided on products of degradation.	This has been addressed in new material added (see previous comment) and in Section 2.3.3.
Section 2.2.1	USA	Caution sounded in note about the reliance on half-lives and suggestion made that more recent data should be sourced.	No new data have been included, but much of the 'cautionary' text in the note has been retained..
Section 2.2.2.1	Canada	New information provided on PBDE concentrations in Great Lakes fish.	New paragraph added.
Section 2.2.2.1	Canada	New information provided about Swedish studies of PBDEs, PCBs and dioxins in earthworms.	New paragraph added.
Section 2.2.2.1	Canada	Two new references provided to detection of PentaBDE in birds and mammals.	References incorporated.
Section 2.2.3.1	Canada	Clarity requested regarding fugacity modeling.	Sentence reworded to improve clarity.
Section 2.2.3.1	Canada	New information about modeling of long-range transport of PBDEs.	New paragraph added.
Section 2.2.3.1	USA	Recent information of US and Canadian air levels should be added.	New information sourced from journals and relevant authors, so text augmented and new references added.
Section 2.2.3.2	Canada	New information about detection of penta BDE in Canadian and Russian Arctic air.	New paragraph added.
Section 2.3.1	Canada	Suggested deletion of general remarks about untouched environment.	Sentence modified to make the comment more specifically about pollution.
Section 2.3.1	USA	Were the beluga data lipid adjusted?	Adjusted data provided in Section 2.3.4 and cross reference provided.
Section 2.3.2	Canada	New information provided about detection of PBDEs in bird eggs and marine mammals.	Four new paragraphs added.
Section 2.3.2	Canada	Suggested deletion of comments on modeling, in view of uncertainties and conflict with empirical evidence.	Paragraph revised to cover this conflict and to differentiate European and North American results.
Section 2.3.2	USA	Information provided on North American trends for environmental compartments, but insufficient data to identify trends in humans.	The information was added to the text.

Section 2.3.3 Human exposure		This is a duplication of section number.	Changed to Section 2.3.4.
Section 2.3.4 (new number)	USA	Request that sample sizes be reported along with data, and assurance provided that analytical procedures were consistent.	Table (Table 2.7) does contain dose sizes. Comment added that most procedures followed internationally accepted protocols, while others were judged by experts to be good practice.
Section 2.3.4	Canada	Suggested that dust as source should be covered in this section.	Included in Section 2.1.1, but cross-reference provided here.
Section 2.3.4	Canada	Comments on occupational exposure that conclude this section are inappropriate here.	Comment added to paragraph that such data are less relevant than environmental data.
Section 2.3.4	USA	Note that there is uncertainty about the relative contributions made by various sources.	This comment was added to the text.
Section 2.3.4	USA	References needed for food studies, two new references provided.	Some references are already provided in the text, and new one incorporated.
Section 2.3.4	USA	Reference to Hale for sewage sludge studies.	Reference included.
Section 2.3.4	USA	Note that levels in the US may not have stabilized like those in Europe.	This distinction was added to the text.
Section 2.3.4	USA	Reference provided to recent study of human levels in the US.	Reference incorporated into text, with comment.
Section 2.3.4	USA	References provided for industrial exposures.	Not included since this is not strictly relevant to environmental health, but text notes that there is extensive literature on this..
Section 2.4	USA	It is noted that the assessment is based mainly on reviews and may not have given adequate consideration to critique experimental protocols. More adequate reference provided.	In the Annex E process it is not possible to undertake a more intense analysis of published data and so it is necessary to rely on reviews. The later reference is cited in the text.
Section 2.4	USA	Suggested text that 'additional studies are needed that follow internationally-accepted guidelines, for the purpose of a risk assessment'.	The present task is to compile a risk profile, not to undertake a full risk assessment. This has been noted in the text.
Section 2.4.1	Canada	Suggested that sub-heading be changed to Ecotoxicity.	Change accepted.
Section 2.4.1	Canada	Suggested that mammalian data be moved to next sub-section.	Sub-heading 2.4.2 moved up so as to accommodate this shift.
Section 2.4.1	Canada	Attention drawn to the existence of data for other biota in Canadian report.	It was felt that a representative selection was already included, and that there was no intention hat the risk profile should be a comprehensive review (a statement also made in the Canadian study). The Canadian/North American data would not have been significantly different.
Section 2.4.2	USA	It was noted that POPRC is not tasked with setting a LOAEL, for which a broader suite of data would need to be examined.	Agreed. Text modified to reflect this view.
Section 2.4.3	USA	Query about whether VKM 2005 study was on a dose/kg/day basis.	The full study was not available to the writer who completed the report, so this query remains unanswered.
Section 2.4.3	USA	Suggestion that long-term exposures may be estimated by comparative techniques.	It was felt unnecessary to speculate on this.
Section 2.4.3	USA	Note that risk assessment are based on European data, and that US data could be 10-20 times greater, and increasing.	Text added to incorporate this comment.

Section 3	Canada	Change Annex E to Annex D.	Change made.
Section 3	Canada	Suggested sentence on trends.	Sentence included.
Section 3	Canada	Request for a better presentation of risk, as found in Canadian Ecological Assessment.	Note was taken of the risk quotient approach taken by Canada, and the results for PentaBDE have been added to the synthesis.
Section 3	Canada	The inclusion of the table from Annex D review is said to be inappropriate.	Submission from France supported its inclusion, and so it was retained.
Section 3	USA	It is suggested that a better synthesis, leading to a statement of risk, should appear in this section, rather than a mere summary. Some suggested text is provided.	The present textual summary has been made Section 3.1, and a new Section 3.2 incorporates the suggested text.
Table 3	USA	New data on neurological effects in fish should be included.	Since the table is reproduced from decision POPRC-1/3, it is not possible to incorporate new information, but the data have been added to Section 2.4.1.
References	Canada	New references (22) detailed.	These have been included in the reference list, together with others.

Responses compiled by Ian D. Rae following revision of the risk profile and reference list.
