TO: Binational Toxics Strategy Sectors Group
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RE: *Comments on TORs for Sector and Substance Workgroups*

DATE: January 10, 2008

In follow-up to the Binational Toxics Strategy (BTS, or "Strategy") Integration Workgroup meeting held on December 13, 2007, in Chicago, IL, we would like to submit the following comments and observations on the terms of reference (TOR) and scope of the work proposed for the new work groups as presented by the chairs of the BTS.

Scope of the Work Groups

The next phase of work to be undertaken on toxic substances in the Great Lakes is urgently needed. While the original Strategy does not explicitly require an expansion of its mandate at this time, we consider the efforts by the BTS chairs to establish the two work groups as a significant and important step towards furthering efforts in addressing the presence and impacts of toxic substances to the Great Lakes ecosystem. The programs should be designed to ensure that present and future efforts that aim to implement the obligations of the Great Lakes Water Quality Agreement regarding the impacts of toxic substances to the Great Lakes ecosystem and all its inhabitants are most effective. For this reason, the following key elements must be included:

1) the promotion and implementation of screening processes to identify substances of concern, with properties and characteristics including persistence, pseudo-persistence (e.g., toxic

chemicals used in sufficient quantities to cause elevated levels near release points), bioaccumulative potential, and the full scope of toxicity, including neurodevelopmental toxicants, endocrine disruptors, etc.

2) capacity for the development and promotion of safe substitutes,
3) the development and implementation of action plans outlining explicit deadlines for reductions, sunsetting, and elimination of substances of concern,
4) provision of sufficient technical and financial assistance by both federal governments to support effective implementation of action plans, and
5) effective public engagement and public reporting mechanism in the program.

While a number of these elements are similar to BTS components that have been utilized during the first ten years of the Strategy, we believe there is a need to increase emphasis on practical precaution methodology. This means analysis and decisions rooted deeply in weight of the evidence and hazard potential rather than solely on the basis of a quantitative risk model, points which were made on several occasions at the December 13 meeting. Two key components of this approach would be ensuring that screening programs identify key chemicals of concern (whether for phase-outs or for phased pollution prevention work) in addition to those that are persistent toxic substances as well as active promotion of safer substitutes. The latter would be a new emphasis for the BTS, but in light of current trends in clean production and sustainable development, we believe entirely reasonable and necessary. In general, we believe this is an appropriate time to consider newer approaches to addressing current and future threats from persistent, bioaccumulative toxic chemicals and other substances of concern in the Great Lakes ecosystem.

Below we offer specific comments on the draft *Terms of Reference* presented by the Co-Chairs of the new workgroups.

Terms of Reference

We appreciate the discussion at the meeting regarding the change in terminology removing "potentially" toxic from the text; nonetheless we reiterate for the record our concerns with this approach. While we recognize that *any* chemical can be considered toxic under some circumstances, our concern is that elimination of the word “potentially” could imply either that we already have all

toxicity information needed to identify toxic substances, or that such information will be available in short order in developing and implementing a robust screening process. But the wide range of potential endpoints (e.g., including carcinogenic, neurotoxic, endocrine disrupter, reproductive and developmental, chronic toxicity, very persistent and very bioaccumulative) are not necessarily addressed extensively in current screening programs nor through any current Great Lakes initiatives, and there is clearly inadequate data across these endpoints for all potential chemicals of concern. In the time taken to either obtain such data or develop better predictive models, further releases of potentially problematic chemicals will be occurring. Absent a weight of evidence approach, we risk the same types of mistakes that have resulted in many chemicals not identified on the original lists of substances of concern now showing up in the tissues and breast milk of Great Lakes residents.

It remains our recommendation that the Terms of Reference either be more explicit to include both known persistent toxic substances and other potentially toxic substances, or that it acknowledge and address the need for more toxicity information now (and thus emphasize that the universe of "persistent toxic substances" is not currently known), and the need for early action on problematic substances, even where complete information is not available. Early action and shifting the burden more towards the producers of chemicals to demonstrate safety rather than the governments to demonstrate harm have for a number of years been promoted in the Great Lakes (e.g., International Joint Commission, 8th Biennial Report). Such early action may, for example, address specific classes of chemicals (such as brominated flame retardants, perfluorinated substances). Such policies will also need to include a parallel process by which identification and promotion of safer alternatives is a necessary requirement where the societal value of a particular use has been demonstrated (such as fire retardation).

Specific comments on Screening Criteria and Management Approach on Toxic Substances in the Great Lakes

In the outline below, we have detailed a number of steps which we believe are critical to the success of the new work groups in achieving their objectives of moving forward to the next level of protection of the Lakes. We address the criteria and assurances necessary for those criteria to be

meaningful, and we propose specific, achievable management strategies for developing measurable milestones and goals.

CRITERIA for adding new chemicals to BTS

* Emphasis must be on inclusiveness of chemicals on the list rather than bias toward exclusion; a model based on current Canadian and proposed SSP screening to eliminate chemicals is neither adequately inclusive nor acceptable because of the high potential for failure based on exclusion biases (as noted below).

* Assurance that the BTS list of "new" chemicals uses the results of categorization (identifying 4,300 substances) completed by Canada but is ***not limited by it***, as other hazardous properties must be considered (including endocrine disrupters, neurodevelopmental toxicants, chronic toxicity, mutagenicity, reproductive and developmental toxicants, carcinogenicity, very persistent, very bioaccumulative, etc.). The US and Canadian governments jointly should consider a new screening process to identify those substances that are of concern in the Great Lakes basin to establish a BTS list of substances of concern:

* Assurance that addition of chemicals is not limited based only on proven "harm";

* Assurance that substances are not identified for action based only on high volume data;

* Consider synergistic and aggregate effects of exposure;

* Chemicals must be considered in the context of all other existing environmental stressors (as opposed to an approach which considers each chemical as if it were the only exposure); and

* Weight of evidence for chemical *classes* with historical data for constituent individual chemicals.

MANAGEMENT and IMPLEMENTATION STRATEGIES:

* *Regulatory options* should be developed and enforced;

* *Shift of onus onto producers and users* of chemicals in the Great Lakes Basin for demonstration of no harm;

* *Responsibility on producers and manufacturers* for data on uses, quantity, and toxicity data of all chemicals in use (including, but not limited to: endocrine disrupters, neurodevelopmental

toxicants, chronic toxicity, mutagenicity, reproductive and developmental toxicants, carcinogenicity, very persistent, very bioaccumulative, etc.);

* *Registration* of chemicals with criteria for type, amount and range of use data required;

* Reliance on *pro-active and aggressive prevention*: front-of-pipe over end-of-pipe strategies;

* Full *compilation* (through a Great Lakes inventory) of all chemicals currently in use and entering the Great Lakes, including, but not limited to:

1) toxicity data

2 range of all known uses

3) volume/amount entering each lake per year through all media, for selected priority chemicals

4) by-product, intermediate, and secondary production amounts

* *Reduction* and *virtual elimination* through action plans in:

1) Development of sector-specific *schedules of chemicals targeted for zero use (*also *action plans* for reduction and elimination);

2) Sector-specific reduction *targets and timelines for substitution* (outlined in action plans) where alternatives already exist (characterized as "sunsetting" by the IJC)

3) *Identification of priority chemicals for R&D* where no alternatives or substitutes currently exist with clear targets and timelines for milestones for reduction, development of alternatives, and virtual elimination;

4) Regulatory framework for *sunsetting of specific chemical classes*;

* Adoption of the *Twelve Principles of Green Chemistry* (as defined by Anastas and Warner (1998), and adopted by the American Chemical Society's Green Chemistry Institute) as the standard for the management process;

* Development of basin-wide programs for supporting green chemistry R&D with grant support to academia to work with targeted sectors; and

* Provide *technical and financial assistance* to facilities required to implement components of action plans and identify safe substitutes.

We appreciate the opportunity to submit these comments, and look forward to a continuing dialogue with the work group chairs, and the Integration Workgroup as a whole, on next steps for the

Binational Toxics Strategy. Should you wish to discuss these issues with us, please do not hesitate to contact us (see below).

Kind regards,

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