PBT Reduction Drafting Team Call Summary
February 8, 2005

Attendees: Susan Boehme, Dale Phenicie, Laura Rauwerda, Brian Hughes, Mike Murray, Debra Jacobson, Ted Smith, Jon Dettling, Elizabeth LaPlante, Gina Bayer

The PBT Team (hereafter Team) discussed the latest version of the draft PBT Strategy Problem Statement. Several comments by Dale Phenicie and Brian Hughes led to proposed edits to the Problem Statement (Appendix A), which reflect general agreement on the following: 1) toxic impacts in the Great Lakes basin are observed at various locations, but not necessarily everywhere, in the basin, 2) chemicals of emerging concern may or may not be defined as "PTSs", but may pose a threat to human or ecological health in the basin, and are therefore of concern to this Team, 3) some attributes of chemicals of emerging concern such principle sources, fate, transport, and certain modes and mechanisms of toxicity, are not fully understood, but much may already be known, and, 4) chemical screening programs may capture some toxicity data, but lack other important information, such as fate and transport properties, representing an important knowledge gap. An updated Problem Statement will be sent out for further review and comment by the Team (Appendix B). The Problem Statement will be posted, with edits, to the PBT Team web page by noon on Friday, February 11.

The Team next reviewed a draft Goals Statement. Dale Phenicie asked for clarification regarding the purpose of the Goals Statement. Ted Smith responded that each Issue Strategy Team has been charged with developing goals as part of the development of their 4-5 page Strategy. Several edits were recommended to the long- and short- term goals. Specifically, language was recommended to strengthen the importance of working with national and international programs on out of basin sources, and to providing consistently protective fish consumption advisories, while recognizing that there may be appropriate differences in how the advisories are developed at different locations around the basin. An updated Goals Statement will be sent out for further review and comment by the Team The Goals Statement will be posted, with edits, to the PBT Team web page by noon on Friday, February 11.

The Team briefly discussed the draft issue white papers. Seven of ten drafts had been received prior to the call. The Team will review and comment on the white papers through noon Friday, February 11, at which point, updated drafts will be posted to the PBT Team web page. PBT Team members that are not planning to attend the Maumee Bay meeting, will be encouraged to provide comments on the white papers, prior to February 22.

Finally, the Team discussed the Maumee Bay State Park Meeting, February 22, 23, 2005 (Appendix C). Several drafting team members stated that they were coming and some said they were working on approvals to travel. A few will be out of town on leave. The Team generally thought it was a good idea to present the white papers at Maumee Bay, to

provide an overview of major programs and activities that address toxics. The following drafting Team members will present the following topics at Maumee Bay:

Regulatory Programs – Sue Brauer
Pollution Prevention/Voluntary Programs – Susan Boehme
Existing Great Lakes PBT Programs – Liz LaPlante
Cleanup and Remediation - TBD
Education and Outreach – Beth Murphy
Chemical Screening Programs – Dale Phenicie
Toxicology Research (Human Health and Ecological) – Matt Hudson
Monitoring and Surveillance – Melissa Hulting
Modeling, Forecasting and Risk Assessment – TBD
Indicators – Jon Dettling

The meeting adjourned.

Appendix A

Version 5: February 8, 2005

Persistent Toxic Substances Problem Statement

I. Impacts

A. Historical Persistent Toxic Substances(PTSs)[1]

The concentrations of monitored PTS in Great Lakes fish have declined significantly following a ban on most PCB manufacturing uses, canceling or suspension of some particularly harmful pesticides, pollution prevention measures, and the significant improvements made in wastewater treatment facilities in the 1970s and '80s. Nonetheless, concentrations of PCBs, some canceled pesticides, and mercury still necessitate the issuance of fish consumption advisories. This threatens the food supply and culture of indigenous and subsistence fishers as well as the sport and commercial fishing industry, regardless of whether native or stocked fish are harvested. Also, toxicity effects to aquatic populations continue to be observed at various locations around the Great Lakes basin.

B. Chemicals of Emerging Concern

Researchers have recently documented the presence of additional chemicals, rountinely used in daily activities, in air, water, and fish and human tissue in the Great Lakes, which may pose threats to human and ecological health. These include surfactants, flame retardants, pesticides going through re-registration under the authority of the Food Quality and Protection Act, pharmaceuticals, personal care products, natural and synthetic hormones, and combustion by-products, to name a few. The acute and chronic toxicities through direct exposure to these substances may be known, but sources,fate and transport, food web bioaccumulation, and toxicity in terms of teratrogenicity and impaired reproduction are not fully understood.

II. Sources and Pathways

PTSs enter the Great Lakes ecosystem primarily from anthropogenic sources. PTSs do not recognize geopolitical boundaries while transported as gases or attached to particles in the air, over the ground and into streams, and through groundwater. Eventually PTSs may become incorporated into the food web or induce direct toxic effects via many different exposure pathways. The Great Lakes are especially vulnerable to PTSs because of their long hydraulic retention times, large surface area, and proximity to large population centers. It is necessary to quantitatively understand the importance of various source – exposure pathways in the lakes in order to best establish programs for reduction of risks to human health and the environment from PTSs.

III. Current and Future Considerations

[1] PTSs include substances that are continuously released to the Great Lakes basin environment in amounts sufficient to cause harm to humans.and wildlife, however PTSs do not include those substances which cause harm primarily through the inhalation pathway (e.g., criteria pollutants, VOCs, etc.)

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Past research, monitoring, and modeling programs have taught us a great deal about the sources, fate, transport, and effects of historical PTSs in the Great Lakes. Existing programs for source control and remediation focus primarily on historical PTSs. For future consideration it will be necessary to expand these programs to include chemicals of emerging concern that are found to be most threatening to human and ecological health in the Great Lakes. Current regulatory and remediation programs, aimed at preventing materials from entering commerce through the Toxic Substances Control Act's and the Federal Insecticide, Fungicide, and Rodenticide Act, provide mixed success to address the problem. These programs are limited by the ability to screen new or proposed chemicals for their source-receptor pathways within the Great Lakes. [Add sentence on the extent of tox testing] Standardized endocrine disruption testsare still in development.

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Appendix B

Desired Goals of the PBT Reduction Strategy Team

Long Term Goals

- Virtually eliminate the release of any or all persistent toxic substances to the Great Lakes basin,
- Prevent the release of toxic substances in toxic amounts to the Great Lakes basin,
- Identify and prevent the release of any or all newly identified sources of persistent toxic substances and "toxic substances in toxic amounts" that may enter the Great Lakes basin, including working with other parties (such as national agencies and international programs) to prevent releases that may also be transported to the Great Lakes basin,
- Remove all Great Lakes fish and wildlife consumption advisories based on toxic constituent concentrations,
- Remediate all sediments contaminated with persistent toxic substances in the Great Lakes basin,
- Remediate other historical/reservoir sources of persistent toxic substances which impact the Great Lakes basin,
- Protect the general public from toxic substances through effective and consistent outreach and education,

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Short Term Goals

- Completely integrate Great Lakes States' standards consistent with 40 CFR 132--Great Lakes Water Quality Guidance into NPDES permits,
- Universal compliance with State Great Lakes Water Quality Guidance standards,
- Universal compliance with the criteria set forth in the Great Lakes Water Quality Agreement, as amended,
- Implement the toxic substances goals and objectives of the Great Lakes Binational Toxics Strategy, the Lake-Wide Area Management Plans and The Great Lakes Strategy 2002,
- Produce and communicate consistently protective fish consumption advice throughout the Great Lakes basin

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Appendix C

PBT Reduction Team Agenda
Maumee Bay Working Meeting
February 22, 23, 2005

February 22, 2005

1:30 – 3:00pm Issue Team updates
--All teams meet together

3:00pm – 5:30pm Overview of Ongoing PBT Activities
Regulatory Programs
Pollution Prevention/Voluntary Programs
Existing Great Lakes PBT Programs
Cleanup and Remediation
Education and Outreach
Assessment
Chemical Screening Programs
Toxicology Research (Human Health and Ecological)
Monitoring and Surveillance
Modeling, Forecasting and Risk Assessment
Indicators
Purpose/Objective: Bring Full PBT Team Up to speed on ongoing activities. Set the stage for brain- storming sessions to evaluate Status Quo.

5:30pm - 7:00pm Dinner

7:00pm – 9:00pm Program Review - Priority Pollutants (including OC Pesticides)
Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.

February 23, 2005

8:00am – 9:30am Program Review - Priority Pollutants (including OC Pesticides)
Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.

9:30am -9:45am Break

9:45am –12:00pm Chemicals of Emerging Concern
Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.

12:00pm – 1:00pm Lunch

1:00pm – 2:00pm	Chemicals of Emerging Concern *Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.*
2:00pm - 3:00pm	PBT Team Conference Call *Purpose/Objective: Provide synopsis of Working Meeting to PBT Team Members not in attendance.*
3:00pm	Adjourn

Attachment A

GLRC PBT Reduction Strategy Drafting Team

Susan	Boehme	New York Academy of Sciences
Sue	Brauer	U.S. EPA, Region 5, Lake Michigan LaMP
Timothy	Brown	Delta Institute
Michael	Cashin	Minnesota Power
Rita	Cestaric	U.S. Environmental Protection Agency
David	De Vault	US Fish and Wildlife Service
Joseph	DePinto	Limno-Tech, Inc.
Jon	Dettling	Great Lakes Commission
Jackie	Fisher	USEPA Great Lakes National Program Office
Matt	Hudson	Great Lakes Indian Fish and Wildlife Commission
Brian	Hughes	Michigan Department of Agriculture
Melissa	Hulting	US EPA-GLNPO
Debra	Jacobson	Illinois Department of Natural Resources
Zoe	Lipman	National Wildlife Federation
Carrie	Lohse-Hanson	Minnesota Pollution Control Agency
Elizabeth	Murphy	EPA-GLNPO
Michael	Murray	National Wildlife Federation
Dale K	Phenicie	Environmental Affairs Consulting
Laura	Rauwerda	Michigan DEQ
Ted	Smith	EPA-GLNPO

Attachment B

Draft PBT Problem Statement

I. Impacts

A. Historical PBTs

The concentrations of monitored persistent, bioaccumulative, and toxic chemicals (PBTs) in Great Lakes fish have declined significantly following a ban on most PCB manufacturing uses and canceling or suspension of some particularly harmful pesticides. This is attributed to reduced use, release, and ambient levels. Nonetheless, concentrations of PCBs, some canceled pesticides, and mercury still necessitate the preparation of fish consumption advisories. This threatens the food supply and culture of indigenous and subsistence fishers as well as the sport and commercial fishing industry, regardless of whether native or stocked fish are harvested.

B. Emerging Chemicals

Researchers have documented the presence of additional persistent and bioaccumulative contaminants in fish and human tissue at concentrations comparable to the monitored PBTs. In addition, national and regional reconnaissance studies have documented the presence of chemicals we use daily in the ambient environment. Chemicals identified through these studies include surfactants, flame retardents, pesticides going through re-registration under the authority of the Food Quality and Protection Act, pharmaceuticals, natural and synthetic hormones, combustion by-products, and so on. The acute and chronic toxicities through direct exposure to these substances may be known, but their source and fate, food web, bioaccumulation factor, and toxicity in terms of teratrogenicity and impaired reproduction typically is not know.

II. Sources and Pathways

PBTs enter the Great Lakes ecosystem from primarily human activity sources. PBTs don't recognize geopolitical boundaries while tranported as gases or attached to particles in the air, over the ground and into streams, and through groundwater. They eventually become incorporated into the food web due to their persistence.

III. The Status Quo

What we know of PBTs is limited by our monitoring programs and the initiative of researchers. We don't implement a so-called precautionary principle to prevent materials from entering commerce except through the Toxic Substances Control Act's premanufacturing notice and the Federal Insecticide, Fungicide, and Rodenticide Act. These programs are limited by the available toxicological tools, which don't include standardized endocrine disruption tests because these test protocols are still in development.

Attachment C

Draft PBT Reduction Strategy Team Retreat Agenda
Maumee Bay State Park, Ohio
February 22, 23, 2005

February 22, 2005

1:00pm Introductions and Overview of Retreat Agenda

1:15pm – 3:45pm Overview of Ongoing PBT Activities
- Regulatory Programs
- Pollution Prevention/Voluntary Programs
- Existing Great Lakes PBT Programs
- Cleanup and Remediation
- Education and Outreach
- Assessment
  - Chemical Screening Programs
  - Toxicology Research (Human Health and Ecological)
  - Monitoring and Surveillance
  - Modeling, Forecasting and Risk Assessment
  - Indicators

Purpose/Objective: Bring Full PBT Team Up to speed on ongoing activities. Set the stage for brain- storming sessions to evaluate Status Quo.

4:00pm – 9:00pm Program Review - Priority Pollutants (including OC Pesticides)
Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.

February 23, 2005

8:00am - 9:30am Program Review – Priority Pollutants (cont.)

10:00am – 3:00pm Emerging Chemicals (or other chemicals, or Chemicals of emerging concern)
Purpose/Objective: Discuss Pros and Cons of Status Quo, gap analysis, Needs, Discuss New Ideas to fill gaps.