



APPENDIX B

**GREAT LAKES BINATIONAL
TOXICS STRATEGY (GLBTS)**

PROGRESS OVERVIEW

1997 – 2006

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GREAT LAKES BINATIONAL TOXICS STRATEGY (GLBTS)

PROGRESS OVERVIEW 1997 – 2006

GLBTS Development, Integration Workgroup, and Stakeholder Forum

1997

- 4/7/97 U.S. and Canada sign the *GLBTS: Canada-United States Strategy for the Virtual Elimination of Persistent Toxic Substances in the Great Lakes*
- 6/26/97 Stakeholders invited to workshop to develop a draft GLBTS Implementation Plan
- 12/97 GLBTS Implementation Plan distributed and Substance participation solicited
- 12/97 GLBTS Website is developed

1998

- 3/23/98 Kick-off implementation meeting in Chicago to form seven substance workgroups
- 6/19/98 The first GLBTS Integration Workgroup meeting is convened in Romulus, Michigan
- 6/98 GLBTS Website is redesigned; PCBs and Mercury Workgroup pages added
- 7/98 GLBTS Website is redesigned; Integration, Dioxins, Pesticides, HCB/B(a)P, Alkyl-lead, and OCS Workgroup pages added
- 10/21-23/98 GLBTS display and presentation (including GLBTS handouts, a brochure, Website cards, GLBTS progress timeline and activity sheets) at SOLEC in Buffalo, NY
- 11/16/98 The first GLBTS Stakeholder Forum is convened in Chicago, IL
- 11/16/98 The first GLBTS Progress Report is distributed

1999

- 1/26/99 GLBTS Integration Workgroup meets in Windsor, Ontario
- 4/27/99 GLBTS Stakeholder Forum is held in Toronto, Ontario
- 4/28/99 GLBTS Integration Workgroup meets in Toronto, Ontario
- EC and US EPA develop draft communications strategy, present it to Integration Workgroup, and revise strategy based on stakeholder comments
- 8/24/99 GLBTS Integration Workgroup meets in Detroit, Michigan
- 9/23-26/99 US EPA, EC and invited speakers give GLBTS session presentation at the IJC Great Lakes Water Quality Forum in Milwaukee, WI
- 9/24/99 A preliminary draft GLBTS Progress Report issued at IJC meeting in Milwaukee, WI
- 10/99 GLBTS main and Mercury Workgroup web pages are redesigned
- 10/7/99 A Canadian *GLBTS Report on Level II Substances* is posted on the GLBTS Website
- 11/18/99 GLBTS Stakeholder Forum is held in Chicago, IL
- 11/19/99 GLBTS Integration Workgroup meets in Chicago, IL
- 12/99 Preliminary planning initiated for a PCP Workshop (to include the GLBTS pesticides, HCB and Dioxin/Furan Workgroups)
- 12/3/99 a U.S. *GLBTS Report on Level II Substances* is posted on the GLBTS Website
- 12/15/99 Draft (Full) 1999 GLBTS Progress Report issued
- 1999 (various dates) Development of a Canadian GLBTS communications plan



2000

- 1/28/00 Municipal Solid Waste and Incineration Workgroup planning conference call
- 2/11/00 Municipal Solid Waste and Incineration Workgroup planning conference call
- 2/15/00 GLBTS Integration Workgroup meets in Windsor, Ontario
- 5/15/00 Protecting the Great Lakes, Sources of PBT Reductions Workshop on Municipal Solid Waste Management is held in Toronto, Ontario
- 5/16/00 GLBTS Stakeholder Forum is held, with the theme “Meeting the Challenge”
- 9/22/00 GLBTS Integration Workgroup meets in Chicago, IL
- 2000 (various dates) GLBTS communications plan is finalized by EC; “key messages” finalized; various communications products in development (brochure, business cards, display unit, letterhead, Website improvements, success stories)

2001

- 2/20/01 GLBTS Integration Workgroup meets in Windsor, Ontario
- 2/21/01 GLBTS 2000 Progress Report is posted to GLBTS Website
- 5/17/01 GLBTS Stakeholder Forum is held in Toronto, Ontario
- 5/18/01 GLBTS Integration Workgroup meets in Toronto, Ontario
- 6/18/01 GLBTS Sector Subgroup begins a series of conference calls to select a short list of sectors for a pilot effort
- 8/28/01 GLBTS Integration Workgroup meets in Chicago, IL
- 9/19/01 GLBTS Sector Subgroup begins information-gathering phase focusing on the short list of sectors
- 11/14/01 GLBTS Stakeholder Forum is held in Chicago, IL, with the theme “Implementation – Partners in Progress”
- 11/15/01 GLBTS Integration Workgroup meets in Chicago, IL
- 11/16/01 GLBTS/LaMP Workshop in Chicago, IL, with the theme of “Program Synergies – Partners in Progress, Exploring how we can mutually support the pollutant reduction needs and efforts of each program synergistically”

2002

- 1/25/02 GLBTS Sector Subgroup begins summarizing findings
- 2/26/02 GLBTS Sector Subgroup presents summary of findings to Integration Workgroup
- 2/26/02 GLBTS Integration Workgroup meets in Windsor, Ontario
- The GLBTS EC/US EPA Website “binational.net” is created
- 5/29/02 GLBTS Stakeholder Forum and Five-Year Anniversary event are held in Windsor, Ontario
- 5/29/02 GLBTS Five-Year Perspective report issued
- 5/30/02 GLBTS Integration Workgroup meets in Windsor, Ontario
- 9/16/02 GLBTS Sector Subgroup holds conference call to discuss a pilot sector project
- 9/18/02 GLBTS Integration Workgroup meets in Chicago, IL
- 12/3/02 GLBTS Stakeholder Forum is held in Chicago, IL
- 12/3/02 Draft GLBTS 2002 Progress Report issued
- 12/4/02 GLBTS Integration Workgroup meets in Chicago, IL



2003

- 2/25/03 GLBTS Integration Workgroup meets in Windsor, Ontario
- 3/01/03 GLBTS Binational.net bookmark created as a marketing tool
- 4/01/03 GLBTS CD ROM containing the Strategy, annual progress reports (1998, 1999, 2000, 2001, & 2002), Five-Year Perspective, and various Strategy Updaters (all in both French and English) is created and 5,000 copies are sent to basin stakeholders and Washington and Ottawa government officials
- 4/03/03 GLBTS presentation to the Lake Superior LaMP Forum in Duluth, Minnesota
- 5/05/03 GLBTS presentation to International Pulp and Paper Conference in Portland, Oregon
- 5/13/03 GLBTS presentation to Commission for Environmental Cooperation, Sound Management of Chemicals (SMOC) meeting in Windsor, Ontario
- 5/14/03 Final GLBTS 2002 Progress Report posted at www.epa.gov/glnpo/bns and binational.net
- 5/14/03 GLBTS Stakeholder Forum held in Windsor, Ontario, in conjunction with CEC SMOC public meeting
- 5/15/03 GLBTS Integration Workgroup meets in Windsor, Ontario
- 6/01/03 GLBTS Update prepared, as well as GLBTS displays in French, Spanish, and English
- 6/11/03 GLBTS presentation to Canadian P2 Roundtable in Calgary, Alberta
- 6/16/03 Conference call with Agricultural Subgroup of Integration Workgroup
- 6/23/03 GLBTS presentation to IAGLR in Chicago, Illinois
- 7/31/03 GLBTS Public outreach tent set up at Chicago Tall Ships event in Chicago, Illinois
- 8/11/03 GLBTS presentation at Emerging Chemicals Workshop in Chicago, Illinois
- 8/19/03 Conference call with LaMP leads to discuss GLBTS/LaMP Crosswalk of priorities
- 9/01/03 *GLBTS 2003 Activity Update* prepared
- 9/04/03 Conference call held with small number of Integration Workgroup members to discuss draft GLBTS Level I Substance Assessment Process
- 9/11/03 GLBTS Integration Workgroup meets in Toronto, Ontario
- 9/11/03 *GLBTS Fall 2003 Workgroup Activity Update* distributed
- 9/18/03 GLBTS attendance at the IJC Public Forum in Ann Arbor, Michigan
- 10/24/03 GLBTS presentation to European delegation at EU REACH Program in Chicago, Illinois
- 11/25/03 Conference call with LaMP and GLBTS Stakeholders to discuss GLBTS Level I Substance Assessment Process
- 12/02/03 GLBTS presentation to Lake Superior LaMP Task Force in Thunder Bay, Ontario
- 12/16/03 GLBTS Stakeholder Forum is held in Chicago, IL
- 12/16/03 Draft *GLBTS 2002 Progress Report* issued
- 12/17/03 GLBTS Integration Workgroup meets in Chicago, IL



2004

- 2/04 Final *GLBTS 2003 Progress Report* posted at www.epa.gov/glnpo/bns and binational.net
- 4/13/04 – 4/15/04 GLBTS Management Framework Workshop in Chicago, Illinois
- 6/17/04 GLBTS Stakeholder Forum is held in Toronto, Ontario
- 6/18/04 GLBTS Integration Workgroup meets in Toronto, Ontario
- 10/07/04 GLBTS Integration Workgroup meets in Toronto, Ontario: Draft *Management Assessment for OCS and Management Assessment for Dioxin and Furans* presented
- 10/07/04 GLBTS Fall 2004 Workgroup Activity Update distributed
- 11/16/04 – 11/18/04 Presentation at Workshop on Environmental Health Effects of Persistent Toxic Substances – Hong Kong: “The GLBTS as a Governance Model to reduce PTS”
- 11/30/04 GLBTS Stakeholder Forum is held in Chicago, IL
- 12/01/04 Draft *GLBTS 2004 Progress Report* issued
- 12/01/04 GLBTS Integration Workgroup meets in Chicago, IL

2005

- 2/10/05 GLBTS update presented to Lake Superior LaMP Chemical committee in Marquette, MI, given by Alan Waffle and E.Marie Wines
- 3/09/05 GLBTS update presented at GLRPPR in Chicago, IL, given by Alan Waffle
- 3/11/05 GLBTS attendance (Alan Waffle) at EC’s Workshop on Pharmaceuticals and Personal Care products in Burlington, Ontario
- 3/23/05 GLBTS Integration Workgroup meets in Windsor, Ontario: *Draft Management Assessments for HCB, B(a)P, PCB, mercury, alkyl-lead, and pesticides* presented
- 3/29/05 GLBTS attendance at IJC Chemical Exposure Workshop in Chicago, IL
- 4/11/05 GLBTS display presented at US National Environmental Partnership Summit
- 5/05 Final *GLBTS 2004 Progress Report* posted at <http://binational.net/bns/2004/index.html>
- 5/17/05 GLBTS Stakeholder Forum is held in Toronto, Ontario
- 5/18/05 GLBTS Integration Workgroup meets in Toronto, Ontario
- 5/24/05 GLBTS presentation given by Ted Smith at IAGLR in Ann Arbor, MI
- 6/01/05 GLBTS presentation at Canadian Pollution Prevention Roundtable in Victoria, British Columbia, given by Tricia Mitchell and Alan Waffle
- 9/15/05 GLBTS Integration Workgroup meets in Chicago, IL
- 9/27/05 GLBTS update presented to Lake Superior LaMP Workgroup in Thunder Bay, Ontario, given by Alan Waffle
- 9/29/05 GLBTS attendance (Ted Smith and Alan Waffle) at SOLEC Chemical Integrity Workshop in Windsor, Ontario
- 11/02/05 GLBTS attendance (Alan Waffle) at IJC GLWQA Public Meeting in Windsor, Ontario
- 12/06/05 GLBTS Stakeholder Forum is held in Chicago, IL



- 12/07/05 Draft *GLBTS 2005 Progress Report* issued

- 12/07/05 GLBTS Integration Workgroup meets in Chicago, IL

2006 and Ongoing

- 2/08/06 Presentation to Binational Executive Committee in Chicago on GLBTS successes and path forward by Gary Gulezian and Danny Epstein

- 2/16/06 GLBTS Integration Workgroup meets in Windsor, Ontario

- 3/07/06 to 3/08/06 GLBTS attendance (Ted Smith and Alan Waffle) at Environment Canada/Ontario Ministry of the Environment “Emerging Chemicals Workshop” in Toronto, Ontario

- 3/29/06 to 3/30/06 GLBTS attendance (Alan Waffle and Tricia Mitchell) at Environment Canada’s “Workshop on Pharmaceuticals” in Burlington, Ontario

- 4/26/06 to 4/27/06 GLBTS attendance (Alan Waffle) at CEC SMOC meeting in Windsor, Ontario

- 4/28/06 GLBTS attendance (Ted Smith and Alan Waffle) at EC & US EPA GLWQA Review in Chicago

- 4/28/06 to 12/06 GLBTS participation as the US (Ted Smith) and Canadian (Alan Waffle) co-chairs of the Toxics Workgroup reviewing the GLWQA

- 5/17/06 GLBTS Stakeholder Forum is held in Toronto, Ontario

- 5/18/06 GLBTS Integration Workgroup meets in Toronto, Ontario

- 5/31/06 GLBTS presentation to Lake Superior LaMP Workgroup in Duluth, Minnesota, given by Alan Waffle

- 6/14/06 GLBTS presentation at Canadian Pollution Prevention Roundtable in Halifax, given by Alan Waffle

- 6/22/06 GLBTS attendance (Alan Waffle) at Great Lakes Cities Initiative meeting in Perry Sound, Ontario

- 7/31/06 Final *GLBTS 2005 Progress Report* posted at <http://binational.net/bns/2005/2005-GLBTS-English-web.pdf>

- 08/02/06 GLBTS and GLWQA presentations at DePaul University, Chicago, given by Danny Epstein and Susan Nameth

- 8/03/06 to 8/07/06 GLBTS promotion booth at Tall Ships event on the Chicago Waterfront, hosted by staff from EC (Canadian lead Tricia Mitchell) and US EPA (US EPA Lead E. Marie Wines)

- 9/19/06 GLBTS Integration Workgroup meets in Chicago, IL

- 9/19/06 GLBTS presentations at Harbin Institute of Technology in Harbin, China, given by Alan Waffle

- 9/25/06 to 9/26/06 *International Workshop on Contaminated Site of Lindane and POPs in China*, Xian, China, given by Alan Waffle, S. Venkatesh, and Yi-Fan Li

- 10/11/06 to 10/12/06 GLBTS attendance (Alan Waffle) at State of Lake Huron Workshop in Honey Harbour, Ontario

- 11/01/06 GLBTS display booth at SOLEC

- 11/05/06 to 11/09/06 GLBTS attendance (Tricia Mitchell) at Society of Environmental Toxicology and Chemistry 27th Annual Meeting in Montreal



- 11/05/06 to 11/09/06 GLBTS attendance (Tricia Mitchell) at Society of Environmental Toxicology and Chemistry 27th Annual Meeting in Montreal
- 11/20/06 GLBTS Presentation at University of Toronto, given by Alan Waffle, S. Venkatesh, and Tricia Mitchell
- 12/06/06 GLBTS Stakeholder Forum is held in Chicago, IL
- 12/07/06 Draft *GLBTS 2006 Progress Report* issued
- 12/07/06 GLBTS Integration Workgroup meets in Chicago, IL
- 12/12/06 to 12/14/06 GLBTS attendance (Ted Smith and Alan Waffle) at first U.S. Conference Characterizing Chemicals in Commerce in Austin, Texas

Substance Activities: Mercury (Hg)

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 Workgroup (WG) is formed at the first implementation meeting
- 5/5/98 WG conference call is held
- 8/24/98 *Background Information on Mercury Sources and Regulations* is posted on the GLBTS Website
- 9/10/98 Options Paper *Developing a Virtual Elimination Strategy for Mercury* is posted on the GLBTS Website
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 11/17/98 GLBTS workshop on Potential Mercury Reductions at Electric Utilities is held in Chicago

1999

- 1/99 GLBTS web postings include: *Wisconsin Mercury Source Book* on community Hg reduction plans, findings of the Mercury Reduction at Electric Utilities workshop, and *Mercury Success Stories*
- 2/99 Information and FAQs on mercury fever thermometers posted on the GLBTS Website
- 3/99 GLBTS web postings include: The WDNR guide, *Mercury in your Community and Environment*, and a manual for hospitals, *Reducing Mercury Use in Health Care*
- 4/99 Workshop on community initiatives for reducing Hg
- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 11/99 Draft GLBTS Step 1&2 *Sources and Regulations* report for mercury is posted on the GLBTS Website

2000

- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 6/00 GLBTS web page on Mercury Thermometers and FAQs is updated
- 8/00 Memo on progress in reducing mercury use posted on the GLBTS Website
- 9/1/00 A final draft GLBTS *Reduction Options* (Step 3) report for mercury is prepared and posted on the GLBTS Website on 9/29/00
- 10/17/00 Expansion of mercury web page links
- 11/18/00 WG meeting at the GLBTS Stakeholder Forum in Toronto

2001



- 5/17/01 WG meeting at the GLBTS Stakeholder Forum in Toronto - 11/14/01 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
2002
- 5/29/02 – 5/30/02 WG meeting at the GLBTS Stakeholder Forum in Windsor, Ontario - 12/2/02 WG meeting in Chicago, IL on reducing impact of dental mercury - 12/3/02 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
2003
- 5/14/03 – 5/15/03 WG meeting at the GLBTS Stakeholder Forum in Windsor, Ontario - 12/16/03 – 12/17/03 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
2004
- 6/17/04 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario - 8/04/04 Workgroup report revised: <i>Options for Dental Mercury Reduction Programs: Information for State and Local Governments</i> - 11/30/04 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
2005
- 5/17/05 WG meeting in Toronto, Ontario - 12/06/05 WG meeting in Chicago, IL
2006 and Ongoing
- 02/06 WG finalizes Management Assessment for Mercury - 5/17/06 WG meeting in Toronto, Ontario - 12/06/06 WG meeting in Chicago, IL
Other Mercury Related Activities
1997 and Earlier
- Chlorine Institute voluntary mercury commitment to reduce mercury use by 50% by 2005 - 12/97 <i>Mercury Report to Congress</i> is released by US EPA
1998
- 5/8/98 Chlorine Institute releases progress report on voluntary mercury commitment - 6/25/98 US EPA and AHA sign an MOU on reducing medical wastes - 9/15/98 Three northwest Indiana steel mills commit to developing mercury inventories and reduction plans - 10/98 IDEM household mercury collection efforts - Dow Chemical Company commits to mercury reductions - PBT Strategy grant to the Northeast Waste Management Officials' Association to encourage state mercury reduction efforts
1999
- 8/99 As part of 1998 agreement, mercury inventories at Indiana steel mills are completed - 10/99 Mercury waste collection component of the Cook County (Illinois) Clean Sweep pilot begins - Six Ontario hospitals sign MOU to voluntarily reduce Hg - Pollution Probe investigates Hg reduction options for electrical products sector in Ontario - Automotive Pollution Prevention Project efforts to phase out Hg



- US EPA grant to Ecology Center of Ann Arbor: promoting mercury P2 in the health care industry
- Western Lake Superior Sanitary District (WLSSD) begins multimedia zero discharge pilot / focus on Hg
- Michigan Mercury Pollution Prevention Task Force
- 11/16/98 Draft *PBT National Action Plan* for Mercury is released by US EPA
- Total mercury used in lamps declines from an estimated 17 tons in 1994 to an estimated 13 tons in 1999, even though significantly more mercury-containing lamps are sold in 1999 than in 1994.

2000

- Chlorine Institute reports 42% reduction, production-adjusted, in mercury use
- US EPA, state agencies, and academic researchers conduct meetings with chlor-alkali industry representatives to coordinate mercury reduction projects
- Olin Corp. cooperates with US EPA, state, and academic researchers on mercury monitoring project at chlor-alkali plant
- Indiana steel mills complete mercury reduction plans; extend invitation to suppliers to commit to developing mercury inventories and reduction plans
- Auto Alliance commits to eliminate mercury switches in auto convenience lighting; New York DEC and Michigan DEQ implement mercury removal programs at auto scrap yards
- Hospitals for a Healthy Environment produces a Mercury Virtual Elimination Plan for hospitals under the AHA-US EPA MOU. State and local governments provide technical assistance to hospitals, and the National Wildlife Federation (NWF) continues its outreach and education efforts, signing up nearly 600 medical facilities to NWF's "Mercury Free Medicine Pledge."
- Wisconsin DNR and Department of Agriculture conduct a dairy mercury manometer replacement program; approximately 375 mercury manometers are recycled.
- University of Wisconsin extension creates a Website and list server to share information about mercury in schools.
- The Thermostat Recycling Corporation collects over 500 lbs of mercury from over 57,000 thermostats collected and processed from January 1, 1998 to June 30, 2000. The program is expanded to the Northeast and will gradually be expanded to include the entire U.S.
- The Great Lakes Dental Mercury Reduction Project funded by the Great Lakes Protection Fund produces a brochure template: *Amalgam Recycling and Other Best Management Practices*. Great Lakes Dental Associations reprint and distribute this document to their memberships. The University of Illinois-Chicago dental school and the Naval Dental Research Institute conduct research on controlling mercury in dental wastewater and help to educate dentists about best management practices.
- Coalitions including Health Care Without Harm and the National Wildlife Federation successfully encourage several national retailers to stop the sale of mercury-containing thermometers to the public. Duluth, Minnesota, Ann Arbor Michigan, unincorporated areas of Dane County, Wisconsin, and several Dane Country municipalities, ban the sale of mercury thermometers.

2001

- 651 hospitals join the National Wildlife Federation's Mercury-Free Hospitals campaign
- Ispat-Inland Indiana Harbor Works, Bethlehem Steel-Burns Harbor Division, US Steel-Gary Works, the Delta Institute, and Lake Michigan Forum created the *Guide to Mercury Reduction in Industrial and Commercial Settings*
- Mercury Switch-out Pilot Program launched by Pollution Probe, Ontario Power Generation, Ontario Ministry of the Environment, and Environment Canada to collect mercury switches from old vehicles



- 2/21/01 A workshop entitled “Extended Producer Responsibility and the Automotive Industry” is sponsored by the Canadian Autoworkers Union’s

Windsor Regional Environment Council and Great Lakes United

2002

- 2/27/02 Great Lakes United kicks off series of information-sharing sessions about auto mercury-switch removal programs for State agency staff

- 4/5/02 Chlorine Institute releases its *Fifth Annual Report to US EPA*, showing a 75% reduction in mercury use by the U.S. chlor-alkali industry between 1995 and 2001, more than meeting this sector’s commitment to reduce mercury use 50% by 2005

- 10/1/02 Thermostat Recycling Corporation announces that it collected 28,000 thermostats and 231 pounds of mercury in the first half of 2002, a 15% increase from mercury collections in the first half of 2001. The program began to serve the 48 continental U.S. states in the fall of 2001.

- 10/18/02 The Hospitals for a Healthy Environment (H2E) program has 335 partners representing 1,019 facilities: 347 hospitals, 618 clinics, 22 nursing homes and 32 other types of facilities. These partners are health care facilities that have pledged to eliminate mercury and reduce waste, consistent with the overall goals of H2E.

2006

- 6/06/06 US EPA reaffirms Clean Air Mercury Rule (CAMR)

Substance Activities: Polychlorinated Biphenyls (PCBs)

GLBTS Workgroup Activities and Reports

1998 and Earlier

- As of January 1993, approximately 25,000 tonnes of high-level PCBs are either in use or in storage in Ontario; 1529 active PCB storage sites in Ontario

- 3/23/98 WG is formed at the first implementation meeting

- 6/15/98 WG requests that the IG develop a strategy on sediments

- 11/10/98 Options Paper *Virtual Elimination of PCBs* is posted on GLBTS Website

- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

1999

- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario

- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

- 11/99 Draft GLBTS Step 1&2 Sources and Regulations report for PCBs is posted on the GLBTS Website

- WG solicits and gains commitment of 3 U.S. auto manufacturers to reduce PCBs

- WG solicits commitment of steel producers to reduce PCBs

2000

- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario

- Final draft GLBTS Step 3 *Reduction Options* report for PCBs is prepared (7/14/00) and posted (9/29/00) on the GLBTS Website

- WG continues to use PCB reduction commitment letters, through EC and US EPA, to seek commitments to reduce PCBs. Specific companies are targeted, primarily major owners of PCB transformers and capacitors, and associations, such as CGLI

- WG solicits and gains commitment to reduce PCBs from 2 Canadian auto manufacturers, 4 Canadian steel producers, and over 30 municipal electrical utilities in Ontario



- WG leaders and Council of Great Lakes Industries (CGLI) finalize outreach letters used to seek PCB reduction commitments from trade associations. CGLI identifies specific trade associations to begin outreach. EC mails letters to trade initial associations. US EPA mailings to follow.
- WG begins to compile case study reports on reasons why companies remove their PCBs - WG begins to collect photographs of PCB-containing electrical equipment to assist potential owners with identification of equipment which may contain PCBs
- WG drafts a fact sheet on PCB-containing submersible well pumps to be used for outreach to potential users of wells and servicers of well pumps.
- As of April 2000, approximately 7,500 tonnes of high-level PCBs are either in use or in storage in Ontario; 1,191 active PCB storage sites in Ontario

2001

- WG continues to mail letters to companies and trade associations seeking commitments to phase out PCBs
- WG prepares case studies submitted by Bethlehem Steel Corporation's Burns Harbor Division and ComEd Energy Delivery, a unit of Chicago-based Exelon Corporation, for posting on the GLBTS Website
- 1/01 PCB federal databases are updated for Canada.
- 5/01 PCB WG progress meeting held in Toronto, Ontario, Canada. WG discusses two reasons that companies are unable to commit immediately to PCB reductions: 1) reduction/replacement is dependent on companies' internal planning and budgeting cycle; 2) reduction/ replacement is tied to market conditions. US EPA and EC will continue mailing out the voluntary reduction and commitment letters to the priority sectors and associations seeking additional commitments to reduce PCBs.
- 5/17/01 WG meeting at the GLBTS Stakeholder Forum in Toronto
- 7/01 US EPA compiles and analyzes data for 1995-1999 submitted by U.S. PCB disposers
- 8/29/01 WG posts photographs of electrical equipment which may contain PCBs (transformers, and capacitors) to GLBTS Website to help increase awareness of the types of equipment that may contain PCBs
- 9/01 In coordination with LaMP activities, EC mails a package of information to all small quantity PCB owners (over 300 owners) in the Lake Superior and Lake Erie Basins to help raise awareness of PCB initiatives underway in support of the GLBTS. The information package contained a copy of PCB Owners Outreach Bulletin, fact sheets, and maps of PCB Storage sites in the Lake Erie and Lake Superior Basins.
- 11/01 PCB WG meeting is held in Chicago, IL. WG discusses the need for more outreach, especially toward small and medium sized companies. Representatives of General Motors outline the company's plan to phase-out all PCB materials from its North American facilities.
- As of April 2001, 80% of high-level PCBs (Askarel > 1%, 10,000 ppm) had been destroyed in Ontario, Canada; however only 25% of low-level PCBs were destroyed, mostly from stored contaminated soil from a contaminated site clean-up in Ontario.
- As of April 2001, approximately 6,000 tonnes of high-level PCBs are either in use or in storage; 992 active PCB storage sites in Ontario.
- 8/30/01 Fact sheet posted to GLBTS Website: PCBs in Submersible Well Pumps
- 11/14/01 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2002

- WG continues to modify BNS-PCB Website based on recommendations received in an email survey conducted by EC and US EPA in November 2001
- 5/02 WG meeting is held at the GLBTS Stakeholder Forum in Windsor, Ontario



- 5/02 Hydro One representative states that the company is free of all high-level PCBs but still has several small stations and other sources of low-level PCBs. Hydro One has introduced a PCB management program that extends to the year 2020.
- 5/02 MOE representative presents a strategy to implement an annual charge for having equipment with PCBs. Amendments for Regulation 362 are proposed, including the addition of a schedule of destruction targets.
- 10/02 Approx. 400 PCB commitment letters are sent to school boards and other sensitive sites in Ontario.
- 10/02 Canada develops a new (draft) plan of outreach and recognition to try to increase the rate of PCB phase-out in Canada. The main elements of the draft plan are to identify and recognize contributions made by individual companies or their industry associations that go beyond regulatory requirements and to publicize success stories.
- As of April 2002, 84% of high-level PCBs (Askarel > 1%, 10,000 ppm) had been destroyed in Ontario, compared to 1993.
- As of April 2002, approximately 4,147.4 tonnes of high-level PCBs are either in use or in storage in Ontario; 916 active PCB storage sites in Ontario.

2003

- 5/14/03 WG meeting at the GLBTS Stakeholder Forum in Windsor, Ontario
- 9/11/03 PCB Reduction Recognition Awards presented to Enersource Hydro, Hydro One, Slater Steel, and Stelpipe Ltd.
- 12/16/03 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2004

- 6/17/04 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 6/17/04 PCB Reduction Recognition Awards presented to City of Thunder Bay and Canadian Niagara Power
- 11/30/04 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2005

- 5/17/05 WG meeting in Toronto, Ontario
- 12/06/05 WG meeting in Chicago, IL

2006 and Ongoing

- 5/17/06 WG meeting in Toronto, Ontario
- 12/06/06 WG meeting in Chicago, IL

Other PCB Related Activities

1999 and Earlier

- US EPA finalizes PCB regulations which include a requirement for U.S. owners to register their PCB transformers
- EC and Ontario government hold two workshops on PCB management in the Toronto area
- 10/99 PCB waste collection component of the Cook County (Illinois) PCB/Hg Clean Sweep pilot begins
- U.S. PCB transformer registration database is updated
- Requests for voluntary PCB reduction commitments are mailed to automotive, iron & steel, and municipal electrical power utilities in Ontario

2000

- Region 5 PCB Phasedown Program and pilot phasedown enforcement policy are finalized
- A PBT workgroup continues to work on a National Action Plan for PCBs



- 2/00 EC mails survey to approximately 500 registered owners of in-use PCB equipment in Ontario, requesting updated information
- Cook County PCB/Hg Clean Sweep pilot concludes
- 11/00 Canada mails letter to over 2000 registered PCB waste storage owners/managers in Ontario for a recent update of their stored PCB inventory which will be used to modify federal databases for better tracking and monitoring
- Update and modification of Federal PCB databases started in 2000 and will continue until completion in 2003
- Three Canadian Federal PCB Regulations are being amended: (1) Chlorobiphenyl Regulation; (2) Storage of PCB Material Regulations; (3) PCB Export Regulations
- Extensive Public Consultation is conducted during summer and fall of 2000 and will continue

2001

- 5/2/01 Final Reclassification of PCB and PCB-contaminated Electrical Equipment rule becomes effective
- US EPA finalizes a rule on Return of PCB Waste from U.S. Territories Outside the Customs Territory of the U.S. The rule clarifies that PCB waste in U.S. territories and possessions outside the customs territory of the U.S. may be moved to the customs territory of the U.S. for proper disposal at approved facilities.
- EC updates National PCB In-Service Inventory from survey of registered owners and prepares fact sheet
- EC's regulatory amendment process proposes the strengthening of federal regulations regarding PCB management

2002

- 42 electrical utilities submit voluntary reduction commitment letters to Environment Canada
- Algoma voluntarily commits to eliminate 71,103 kgs (44,400 litres) of PCBs by Dec. 2005
- Approximately 27 school boards and sensitive sites respond to PCB commitment letters; 18 of those companies reported that all PCBs were eliminated from their inventories; 3 reported that all high-level PCBs were eliminated from their inventories

2003

- Amended Canadian PCB regulations are expected to be published in the Canada Gazette I and II in 2003. These regulations will target phase-out of high-level PCB use by 2007, low-level PCB use by 2014, and prohibit storage after 2009.

2005

- 06/05 An event report on the May 2005 PCB Award Ceremony is published under the title: "Ontario companies recognized for PCB phase-out" page 8, Canadian HazMat Magazine, June/July 2005, accessible at www.hazmatmag.com.

2006 and Ongoing

- 11/04/06 Proposed Canadian PCB regulations are published in the *Canada Gazette I*.

Substance Activities: Dioxins/Furans

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 WG is formed at the first implementation meeting
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

1999

- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 6/1/99 WG Conference call: sources discussions



- 7/7/99 WG Conference call: sources discussions
- 9/7/99 WG Conference call: developing a decision tree source prioritization process
- 10/5/99 WG Conference call: finishing development of a decision tree process
- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 12/7/99 WG Conference call: application of the decision tree process

2000

- 1/11/00 WG Conference call: continuing the decision tree process
- 2/1/00 WG Conference call; decision made to initiate a Burn Barrel Subgroup
- 3/7/00 WG Conference call: continuing the decision tree process
- 4/4/00 WG Conference call: continuing the decision tree process
- 4/4/00 Burn Barrel Subgroup has inaugural teleconference
- 4/25/00 Burn Barrel Subgroup teleconference: strategy matrix discussed
- 5/2/00 WG Conference call: continuing the decision tree process
- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario: decision tree process is completed
- 5/26/00 GLBTS draft Step 1&2 *Sources and Regulations* report is prepared
- 7/11/00 WG Conference call: developing reduction projects for high priority sectors
- 8/1/00 Burn Barrel Subgroup teleconference: discussion Terms of Reference; link to Lake Superior LaMP
- 8/18/00 An addendum to the GLBTS *Draft Sources and Regulations* report is prepared to address the newly released U.S. Dioxin Reassessment and the draft report is posted (9/29/00) on the GLBTS Website
- 9/12/00 WG Conference call: developing reduction projects
- 9/12/00 Burn Barrel Subgroup teleconference: discussion of Chisago County "Buyback" program; discussion of survey questions regarding state/local regulatory frameworks, and garbage quantity/quality questions.
- Final GLBTS Step 3 *Reduction Options* report is prepared (9/27/00) and the report is posted (9/29/00) on the GLBTS Website
- 11/14/00 Burn Barrel Subgroup teleconference: outline of a strategy document prepared.
- 11/00 Discussion papers on Landfill Fire and Incinerator Ash Management prepared for workgroup review.

2001

- The WG continues to collect information regarding emissions from steel manufacturing, landfill fires, and incinerator ash management
- 1/16/01 Burn Barrel Subgroup teleconference: Burn Barrel Strategy
- 2/6/01 WG Conference call
- 2/13/01 Burn Barrel Subgroup teleconference: Review presentation for Integration Workgroup
- 3/13/01 Burn Barrel Subgroup teleconference: Status of efforts to prepare regulatory profile
- 4/10/01 Burn Barrel Subgroup teleconference: Proposal for US EPA funding of subgroup activities
- 5/8/01 Burn Barrel Subgroup teleconference: Review Strategy/ Implementation Plan document
- 5/17/01 WG meeting at the GLBTS Stakeholder Forum in Toronto: WG approves Burn Barrel Strategy/ Implementation Plan document; Canadian and US presentations on wood preservation



- 6/12/01 Burn Barrel Subgroup teleconference: Implementation activities for Summer/Fall
- 6/22/01 Burn Barrel Subgroup receives \$55k of US EPA PBT funding
- 10/9/01 Burn Barrel Subgroup teleconference: Regional Lake Superior campaign
- 11/6/01 Burn Barrel Subgroup teleconference: Sharing information
- 11/14/01 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 12/18/01 Burn Barrel Subgroup teleconference: Sharing information

2002

- 2/12/02 Burn Barrel Subgroup teleconference: web page initiation, bylaws/ordinance discussion.
- 3/19/02 Burn Barrel Subgroup teleconference: web page & list serve development, outreach updates
- 4/5/02 Lake Superior Region workshop on household garbage burning issue – Thunder Bay, ON
- 4/16/02 Burn Barrel Subgroup teleconference: web page & list serve development
- 4/24/02 WG Conference call: discussing ash management
- 5/14/02 Burn Barrel Subgroup teleconference: finalize web page, prepare for Windsor GLBTS meeting
- 5/30/02 WG meeting at the GLBTS Stakeholder Forum in Windsor: demonstration of newly launched subgroup Website “Trash and Open Burning in the Great Lakes”. The WG meeting was held jointly with the HCB/B(a)P WG due to common issues that are of interest to both workgroups.
- 6/18/02 Burn Barrel Subgroup teleconference: Planned activities for summer, addressing “burners” for sale; purchase Website domain name www.openburning.org
- 7/24/02 WG Conference call: discussing the treated wood issue
- 9/10/02 Burn Barrel Subgroup teleconference: Updates on activities in various jurisdictions
- 11/13/02 WG Conference call: discussing a pilot project on the treated wood issue

2003

- 3/18/03 Burn Barrel Subgroup teleconference: Exploring partnerships with health organizations
- 5/14/03 WG meeting at the GLBTS Stakeholder Forum in Windsor, Ontario
- 6/3/03 Burn Barrel Subgroup teleconference: US EPA Office of Solid Waste outreach materials
- 7/31/03 WG teleconference: Draft two-year workplan
- 9/9/03 Burn Barrel Subgroup teleconference: WDNR’s “Air Defenders” kit
- 11/4/03 Burn Barrel Subgroup teleconference: Addressing suppliers of small backyard incinerators
- 11/4/03 WG teleconference: Draft two-year workplan; finalizing the Burn Barrel Strategy
- 12/16/03 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2004

- 3/02/04 WG teleconference: Progress on issue papers
- 3/09/04 Burn Barrel Subgroup teleconference
- 5/11/04 Burn Barrel Subgroup teleconference
- 6/04 Draft issues papers prepared on *Emissions from Agricultural Burning, Structure Fires, Tire Fires, and Wildfires and Prescribed Burning*
- 6/17/04 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 9/14/04 Burn Barrel Subgroup teleconference
- 9/09/04 Burn Barrel Subgroup teleconference



- 10/14/04 WG teleconference: Draft <i>Management Assessment for Dioxins</i> - 11/30/04 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
2005
- 5/17/05 WG meeting in Toronto, Ontario - 12/06/05 WG meeting in Chicago, IL
2006 and Ongoing
- 5/17/06 WG meeting in Toronto, Ontario - 12/06/06 WG meeting in Chicago, IL
Other Dioxin/Furan Related Activities
1999 and Earlier
- WLSSD begins multimedia zero discharge pilot / focus on dioxins - Two Ontario utilities eliminate use of PCP in treated poles
2000
- 1/00 WLSSD report on open barrel burning practices is released - 2/00 Wood stove changeover pilot programs in Traverse City, MI, and Green Bay, WI - 6/12/00 draft chapters of the <i>U.S. Dioxin Reassessment</i> for external scientific review are released - 9/28/00 Three draft chapters of the <i>U.S. Dioxin Reassessment</i> for SAB review are released
2001
- February 2001, Release of <i>National Inventory of Releases of Dioxins and Furans, Updated Edition</i> , by EC - May 2001, Release of report "Characterization of Organic Compounds from Selected Residential Wood Stoves and Fuels" by EC
2002
- PCP re-registration review proceeding as joint Canada/U.S. endeavor
2003
- 7/18/03 CEC draft Phase One North American Regional Action Plan on Dioxins and Furans, and Hexachlorobenzene available for public comment - <i>Ash Characterization Study</i> in Ontario - Secondary metal smelter release inventory study in Ontario - US EPA develops Backyard Trash Burning Website and brochures available at www.epa.gov/nsw/backyard - Public release of first US National Dioxin Air Monitoring Network (NDAMN) ambient air monitoring data - Canada-wide Standards for iron sintering and steel manufacturing endorsed in March 2003 - Release of Wisconsin "Air Defenders" Kit for Burn Barrel education - Dioxin sampler added at an Integrated Atmospheric Deposition Network (IADN site), Burnt Island
2004 and ongoing
- US EPA compiles case studies of open burning reduction efforts



Substance-Specific Activities: Pesticides

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 WG is formed at the first implementation meeting
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 12/31/98 Draft GLBTS Challenge report for the Level I pesticides is posted on the GLBTS Website

1999

- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2000

- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- GLBTS U.S. Pesticides Challenge Report: *The Level 1 Pesticides in the Binational Strategy* is finalized (3/1/00) and posted (9/29/00)
- 5/00 EC announces that with the cooperation of PMRA they have reevaluated their position on Level I pesticides, and that based on all available information have met the Level I challenge.

2001

- WG reviews pollution prevention opportunities for Level II pesticides (endrin, heptachlor, lindane and HCH, tributyl tin, and pentachlorophenol) and begins preparing report

Other Pesticide Related Activities

1999 and Earlier

- 10/96 EC prepares report: *Canada-Ontario Agreement Objective 2.1: Priority Pesticides Confirmation of No Production, Use, or Import in the Commercial Sector in Ontario*
- US EPA funding to four existing Clean Sweep programs for pilot data collection efforts for Level I pesticides

2000

- Draft National Action Plan for Level 1 Pesticides under the U.S. National PBT Initiative completed and released for review and public comment
- PBT Pesticides Workgroup reviewing toxaphene remediation in Brunswick, GA
- Level I PBT pesticides (except mirex) are regularly collected by ongoing Clean Sweep programs
- Phase out of the Level II Pesticides lindane and tributyl tin compounds are the subject of bi-national negotiations through pesticide regulatory agencies in the U.S. and Canada

2001

- Waste pesticide collections (Clean Sweeps) continue
- 10/5/01 Members of the world's primary maritime organization, the International Maritime Organization, adopt the *International Convention on the Control of Harmful Anti-fouling Systems on Ships*. The agreement calls for a global prohibition on the application of organotin compounds by January 1, 2003, and a complete prohibition by January 1, 2008.

2002

- PCP re-registration review proceeding as joint Canada/U.S. endeavor

2004 and Ongoing

- At the end of 2004, lindane use was discontinued in Canada.
- In 2006 U.S. manufacturers agreed to relinquish the remaining registrations for lindane (use will cease in the U.S. in 2009).



Substance-Specific Activities: Hexachlorobenzene (HCB) / Benzo(a)pyrene (B(a)P)

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 WG is formed at the first implementation meeting
- 9/98 & 10/98 Discussions are held with the pesticide manufacturing, chlorinated solvent manufacturing, and petroleum refinery industries regarding their emission levels, and to determine any success stories, pollution prevention opportunities, and other planned or possible emission reduction actions
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

1999

- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 11/99 Draft GLBTS Step 1&2 *Sources and Regulations* Reports for B(a)P and HCB are posted on the GLBTS Website

2000

- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- Discussions held with the U.S. Scrap Tire Management Council and scrap tire managers in the Midwest
- 6/15/00 Final drafts GLBTS Step 3 *Reduction Options* reports for B(a)P and HCB are prepared
- 7/12/00 Final drafts GLBTS Step 3 *Reduction Options* reports for B(a)P and HCB are posted on the GLBTS Website
- 9/21/00 WG conference call is held
- 10/00 draft Canadian Steps 1& 2 reports for HCB and B(a)P (PAHs) circulated to stakeholders and workgroup members for comments

2001

- 5/17/01 WG meeting at the GLBTS Stakeholder Forum in Toronto
- 11/14/01 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- Canada implements Strategic Options Processes with steel mills and wood preservers
- Algoma Steel signs an *Environmental Management Agreement* with EC and OME to address environmental priorities
- A Wood-stove Changeout Program is held in Georgian Bay, Ontario, in conjunction with the Hearth Products Association of Canada

2002

- 5/30/02 WG meeting at the GLBTS Stakeholder Forum in Windsor, Ontario
- Wood stove change-out outreach material in development, a Website may be developed to promote change-outs and share information with stakeholders
- Petroleum refinery B(a)P emissions analysis completed
- Preparation of incentives for scrap tire pile recycling begins
- Status and potential for reduction of newly inventoried primary aluminum B(a)P emissions determined
- Work with Council of Great Lakes Industries (CGLI) and pesticide industry continues to determine pesticide HCB contaminant levels
- Success stories of reductions in HCB TRI releases from the chemical industry are identified



- Outreach activities (e.g., Website development, preparation of consumer information sheets) are conducted to increase public awareness of environmental impacts, safe handling, and applications of used treated wood
- WG seeks to improve linkages and integration of release information and environmental data on persistent toxics
- WG works to fill release data gaps, resolve questions about company NPRI release estimates for Level I substances, and develop reduction projects with stakeholders
- 12/3/02 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2003

- 5/14/03 WG meeting at GLBTS Stakeholder Forum in Windsor, Ontario
- Work with CGLI and pesticide industry, to determine pesticide HCB contaminant levels, continues
- Rubber Manufacturers Assn. provides detailed information on scrap tire management in the Great Lakes Basin
- Resource needs identified to successfully implement a Scrap Tire Outreach Plan
- B(a)P emissions from coke ovens in basin continue to decline as a result of shutdowns and regulations
- Work on more accurate B(a)P inventory (especially for air emissions)
- Several conference calls held on Woodstove Smoke Reduction contract to encourage best practices and develop outreach materials
- Natural Resources Canada *Burn it Smart!* campaign conducts over 300 residential wood-burning workshops across Canada; campaign presentation to be updated to include wood stove change-out and more workshops planned for Ontario
- Initial discussions held with Canadian Vehicle Manufacturers' Association on verification of B(a)P release estimates for the on-road motor vehicle sector
- 12/16/03 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2004

- 6/17/04 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- US EPA wood stove/fireplace initiatives: media outreach package, Website, fact sheets and labeling program promoting EPA-certified stoves and clean/safe wood burning practices.
- Fifty-one *Burn it Smart!* public education workshops delivered in 40 Ontario rural and First Nations communities in 2004
- Work with CGLI and pesticide industry to determine pesticide HCB contaminant levels, continues
- Re-assessment of Ontario HCB and B(a)P releases from use of pentachlorophenol-treated and creosote-treated wood products.
- 11/30/04 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL

2005

- 5/17/05 WG meeting in Toronto, Ontario
- Prepared *Management Assessment Reports for HCB and B(a)P* using the General Framework to Assess Management of GLBTS Level 1 Substances
- 31 *Burn it Smart!* workshops held in various First Nation communities, Ontario communities and 2 U.S. border cities
- Conducted tests on artificial logs to determine emissions
- Worked with CGLI, pesticide industry, and the Pest Management Regulatory Agency of Health Canada to determine HCB releases from pesticide application



- Surveyed 2001 Georgian Bay Wood Stove Changeout and Education seminar attendees to follow-up on changes to their wood burning practices
- Continued to promote scrap tire pile inventory development and mapping, and clean-up initiatives
- 12/06/05 WG meeting in Chicago, IL

2006 and Ongoing

- 5/17/06 WG meeting in Toronto, Ontario
- 17 *Burn it Smart!* workshops held in various First Nation and tribal communities, Ontario communities, and two U.S. border cities. Approximately 220 people attended these workshops.
- Initiated a North American HCB modeling project to evaluate long-range transport impacts
- Worked with CropLife Canada and Pest Management Review Agency to improve estimates of Canadian HCB releases from pesticide application.
- New York Academy of Sciences held a conference call in October with stakeholders from both U.S. and Canada to discuss estimates of PAH releases from creosote-treated wood.
- 12/06/06 WG meeting in Chicago, IL

Other HCB/B(a)P Related Activities

1999 and Earlier

- Dow Chemical Company commits to HCB reductions
- Two Ontario utilities eliminate use of PCP in treated poles
- U.S. chlorothalonil manufacturer reduces HCB content through process improvements
- 10/99 Draft Report, *Global HCB Emissions* (Robert Bailey, 1999), is distributed to the WG
- 1/99 wood stove changeover pilot program for Eastern Ontario

2000

- 1/00 WLSSD report on open barrel burning practices is released
- 2/00 Wood stove changeover pilot programs in Traverse City, MI, and Green Bay, WI
- PBT workgroups continue to work on draft *National Action Plans* for HCB and B(a)P
- 5/5/00 Robert Bailey prepares report, *HCB Concentration Trends in the Great Lakes*, for the WG

2001

- 2/01-4/01 The Hearth Products Association expands the Great Lakes Great Stove Changeout Program to 12 States
- 6/01 US EPA issues an administrative order requiring Magnesium Corporation of America (Rowley, UT) to ensure proper handling, containment, and disposal of anode dust found to contain high levels of HCB (>12,000 ppm), as well as dioxins, PCBs, and chromium

2002

- Source release information to improve inventories collected through voluntary stack testing
- An emission testing program for wood burning in fireplaces, woodstoves, and pellet stoves developed and implemented with partners to fill information gaps
- PCP re-registration review proceeding as joint Canada/U.S. endeavor

2003

- 7/18/03 CEC draft Phase One North American Regional Action Plan on Dioxins and Furans, and Hexachlorobenzene available for public comment
- An EPA rule to control emissions (including HCB) from hydrochloric acid production is promulgated



- The “Voluntary Woodstove/Fireplace Smoke Reduction Activities and Outreach Materials” contract awarded by EPA
- An EPA rule for the control of coke oven battery stack emissions (including B(a)P) is promulgated
- HCB added to CEPA listing of prohibited toxic substances; proposed regulation published to prohibit products with concentrations greater than 20 ppb

2004

- Twelve Wood Energy Technology Transfer Inc. training workshops held in Ontario
- US EPA *Scrap Tire Pile Mitigation Support Project* underway promoting mapping and clean-up of tire piles.
- Scrap tire pile cleanup forum held in Chicago on February 23 – 24, 2004.
- Proposed Ontario Tire Stewardship scrap tire diversion program awaiting approval from the Ontario Ministry of the Environment.
- Independent third party audits verify Ontario’s four metallurgical coke producers meeting reduction goals set out in best practice manual for controlling PAH (includes B(a)P) releases).

2005

- Amendments to U.S. *Air Toxics Standards for Coke Oven Batteries* came out in April 2005.
- US EPA finalized rules on wastewater discharges from iron and steel facilities.
- Developing U.S. best practices Scrap Tire Cleanup Guidebook.
- Partnered with The Home Depot to promote *Burn it Smart!* at six stores in Eastern Ontario.
- Partnered with the Puget Sound Clean Air Agency to conduct more emissions testing on wax firelogs and regular cord wood.
- Commenced Ontario B(a)P mapping project to highlight priority areas.

2006 and Ongoing

- US EPA initiated Green Stoves Labeling Program
- US EPA initiated studies to evaluate Outdoor Wood Boilers
- EC commenced information gathering exercise with Hearth, Patio and Barbecue Association of Canada on outdoor wood boiler usage in Ontario and Eastern Canada
- EC completed B(a)P mapping project for the Great Lakes Basin by adding Ontario information
- EC worked with Ontario Ministry of the Environment and initiated other projects to improve the emission inventories of HCB and B(a)P.
- New York Academy of Sciences published an Ecological Assessment and Pollution Prevention Report detailing PAH releases from all sources in New York and New Jersey Harbor
- *Burn-it-Smart!* public education information provided at Cottage Life Shows in Toronto in April and November, at the International Plow Match in Peterborough in September, and the Home Hardware national sales meeting in St. Jacobs (north of Waterloo) in September
- EC produced final report on artificial log study with Puget Sound Clean Air Agency
- EC partnered with Hearth, Patio and Barbecue Association on emission testing of five conventional wood stoves and drafted report
- Ontario Ministry of the Environment announced that the Used Tire Program was deferred beyond the immediate future
- US EPA initiated a Mid-West Clean Diesel Initiative in Region 5 to reduce diesel emissions



Substance-Specific Activities: Alkyl-lead

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 WG is formed at the first implementation meeting
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 12/31/98 Draft GLBTS Challenge report for alkyl-lead is posted on the GLBTS Website

1999

- 1/99 EC prepares *Alkyl Lead Inventory Study - Sources, Uses and Releases in Ontario, Canada: A Preliminary Review*, and posts report on the GLBTS Website. The report concludes that the Canadian challenge of reducing alkyl-lead use by 90% between 1988 and 2000 has been exceeded.
- 9/8/99 GLBTS and PBT workgroups meet with National Motor Sports Council to discuss voluntary phase-out of leaded gasoline
- 10/29/99 draft GLBTS *Sources, Regulations and Options (Steps 1, 2 & 3) Report for Alkyl-Lead* is posted on the GLBTS Website

2000

- GLBTS *Sources, Regulations, and Reduction Options (Step 1, 2 & 3) report for alkyl-lead* is finalized (6/00) and posted (9/29/00) on the GLBTS Website
- GLBTS U.S. Challenge on Alkyl-lead: *Report on the Use of Alkyl-lead in Automotive Gasoline* is finalized (6/00) and posted (9/29/00) on the GLBTS Website

2001

- The U.S. meets the challenge of confirming no use of alkyl-lead in automotive gasoline. The US EPA PBT Program takes the lead for the U.S. in coordinating stakeholder efforts to reduce remaining alkyl-lead releases

Other Alkyl-lead Related Activities

1999 and Earlier

- Work begins on a draft *National PBT Action Plan* for Alkyl-lead

2000

- 8/25/00 A Draft *PBT National Action Plans* for alkyl-lead is posted on the PBT Website for public review and comment
- Auto racing industry expresses interest in working with US EPA to find lead-free gas substitutes

2001

- US EPA begins working with NASCAR to permanently remove alkyl-lead from racing fuels used, specifically, in the Busch, Winston Cup, and Craftsman Truck Series



Substance-Specific Activities: Octachlorostyrene (OCS)

GLBTS Workgroup Activities and Reports

1998

- 3/23/98 WG is formed at the first implementation meeting
- 6/16/98 Background Paper and Draft Action Plan for OCS posted on GLBTS Website
- 11/16/98 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- 12/31/98 Draft GLBTS Challenge report for OCS is posted on the GLBTS Website

1999

- 4/27/99 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 11/18/99 WG meeting at the GLBTS Stakeholder Forum in Chicago, IL
- Data on OCS trends in fish is assessed by the WG

2000

- 5/16/00 WG meeting at the GLBTS Stakeholder Forum in Toronto, Ontario
- 6/30/2000 EC draft report on Octachlorostyrene Sources, Regulations and Programs for the Province of Ontario 1988, 1998, and 2000 forwarded to interested stakeholders
- 9/22/00 Draft GLBTS Stage 3 report for OCS is distributed at the 9/22 Integration Workgroup meeting and e-mailed to the OCS Workgroup
- 12/00 US EPA and EC convene a meeting of North American magnesium producers to promote sharing of lessons regarding methods for preventing and managing OCS and other chlorinated hydrocarbon wastes

2004

- 8/04 Draft *Management Assessment for OCS* (Step 4) Report prepared

Other OCS Related Activities

1999 and Earlier

- 3/10/99 CGLI report, OCS and Suggested Industrial Sources: A Report to the GLBTS Workgroup, is submitted to the workgroup

2000

- 8/25/00 A Draft PBT National Action Plan for OCS is posted on the PBT Website for public review and comment

2002

- 4/02 Toxics Release Inventory data for 2000 is made available to the public

Sediments

Canadian and U.S. Activities

1998 and Earlier

- 6/15/98 PCB WG requests that the IG develop a strategy on sediments
- 6/19/98 Integration WG discusses sediments challenge
- US EPA provides guidance to workgroups on how to deal with sediments within chemical-specific workgroups

1999

- 1/26/99 Overview and presentation of IJC SedPAC Activities given at Integration WG meeting
- 2/99 Integration WG members develop a draft charge for a sediments subgroup
- 4/28/99 Draft Sediments subgroup charge presented at Integration WG meeting



2000
- 2/15/00 US EPA and EC present a draft sediment reporting format at the Integration WG meeting. The proposed format will map progress and report annually on sediment remediation in the Great Lakes Basin using 1997 as the baseline year - 5/16/00 At the Stakeholder Forum, US EPA and EC present the draft sediment reporting format and commit to hold a sediment technology workshop
2001
- 4/24/01 US EPA and EC host a two-day workshop on "Removing and Treating Great Lakes Contaminated Sediment," presenting sediment remediation technologies and case studies
2002 and Ongoing
- Ongoing assessments and remediations in both the U.S. and Canada within the Great Lakes watershed (see Section 6.0)
Related Sediment Activities
1998 and Earlier
- 11/97 The IJC's Sediment Priority Action Committee (SedPAC) issues draft white paper <i>Overcoming Obstacles to Sediment Remediation in the Great Lakes Basin</i> - 12/1-2/98 IJC SedPAC holds "Workshop to Evaluate Data Interpretation Tools Used to Make Sediment Management Decisions" in Windsor, Ontario
2002
- 1/02 The second National Sediment Quality Survey report to Congress, <i>The Incidence and Severity of Sediment Contamination in Surface Waters of the United States, National Sediment Quality Survey: Second Edition</i> , is released for review by US EPA
2004
- Work under The Great Lakes Legacy Act begins
Long-Range Transport (LRT) Activities
1999
- 11/19/99 EC presents the status of their LRT effort at the Integration WG meeting
2000
- 3/27/00 EC prepares report: <i>Long-Range Transport of Persistent Toxic Substances to the Great Lakes: Review and Assessment of Recent Literature</i> (Ortech Environmental)
2001
- Several studies are undertaken in the U.S. and Canada to characterize global transport processes.
2003 and Ongoing
- 9/16/03 - 9/17/03 EC and US EPA sponsor LRT Workshop in Ann Arbor, MI, with support of the CEC, the IJC, and the Delta Institute - 9/03 LRT workshop background paper, the workshop program, presentations, and draft summary document are posted on the Internet at http://delta-institute.org/pollprev/lrtworkshop/_workshop.html - Research into long-range transport of persistent toxic substances to the Great Lakes continues



General Activities Related to Reductions in GLBTS Substances

US EPA Regulatory Determinations

1998 and Earlier

- 12/95 Maximum Available Control Technology (MACT) rules for large Municipal Waste Combustors (MWC) are promulgated
- 9/97 MACT rules for Medical Waste Incinerators (MWI) are promulgated
- 4/15/98 Pulp, Paper, and Paperboard Cluster Rule is promulgated
- 6/29/98 Amendments to the PCB Disposal Regulations are finalized
- 11/12/98 Federal Plan for MACT Implementation for large MWCs is finalized

1999

- 5/28/99 An Advance Notice of Proposed Rulemaking is released for the RCRA LDR for Mercury-Bearing Hazardous Wastes
- 7/6/99 Federal Plan for MACT Implementation for MWI is proposed
- 8/30/99 MACT for small MWCs are proposed (expected to be final in 2000)
- 9/30/99 Final Standards for Hazardous Air Pollutants for HWC are promulgated
- 10/29/99 TRI Amendments: new PBT reporting thresholds

2000

- 12/00 Compliance deadline for large MWC MACT
- 9/02 Compliance deadline for MWI MACT
- 1/1/00 New TRI reporting thresholds for PBTs become effective

2001

- US EPA finalizes the Reclassification of PCB and PCB-contaminated Electrical Equipment rule and a rule on Return of PCB Waste from U.S. Territories Outside the Customs Territory of the U.S.

2002

- PCP re-registration review proceeding as joint Canada/U.S. endeavor
- 4/02 the first year of data reported under TRI PBT rule become available
- 2/14/02 President Bush announces Clear Skies Initiative to cut mercury emissions from power plants by 70%

2005

- 5/18/05 US EPA publishes Clean Air Mercury Rule

2006

- 6/06/06 US EPA reaffirms Clean Air Mercury Rule

US EPA Activities

1999 and Earlier

- 6/97 *Deposition of Air Pollutants to the Great Waters: Second Report to Congress* is released
- 12/97 *Mercury Report to Congress* is released
- 4/98 *Final Emission Inventory Data for Section 112(c)(6) Pollutants* is released
- 11/16/98 US EPA's Multimedia PBT Strategy is announced
- 11/16/98 Under the PBT Strategy, a draft *National Action Plan for Mercury* is released
- PBT Strategy grant awarded to WLSSD to work on reducing open trash burning
- U.S. PCB transformer registration database is updated
- Sample collection begins for the National Study of Chemical Residues in Fish
- U.S. GLBTS workgroup leaders participate in development of Draft National Action Plans of part of PBT Strategy



2000
<ul style="list-style-type: none"> - 6/00 <i>Deposition of Air Pollutants to the Great Waters: Third Report to Congress</i> is released - 6/12/00 draft chapters of the <i>U.S. Dioxin Reassessment</i> for external scientific review are released - 9/00 US EPA's 1996 National Toxics Inventory is released - 9/28/00 Three draft chapters of the U.S. Dioxin Reassessment for SAB review are released - PBT workgroups continue to work on National Action Plans for HCB, B(a)P, the Level I pesticides, and PCBs - US EPA's Office of Air and Radiation and Office of Water collaborate on an Air-Water Interface Workplan to address atmospheric deposition of toxics and nitrogen to U.S. water bodies.
2001
<ul style="list-style-type: none"> - 5/23/01 U.S. signs the United Nation's global treaty on Persistent Organic Pollutants (POPs)
2002
<ul style="list-style-type: none"> - 1/02 <i>The Incidence and Severity of Sediment Contamination in Surface Waters of the United States, National Sediment Quality Survey: Second Edition</i> is released for review - 7/23/02 Final PBT National Action Plan for Alkyl-lead published - Preliminary data from first year of National Study of Chemical Residues in Lake Fish Tissue released
2004
<ul style="list-style-type: none"> - 5/18/04 Great Lakes Interagency Task Force created by U.S. Executive Order
EC Regulatory Determinations
1999 and Earlier
<ul style="list-style-type: none"> - <i>Canadian Environmental Protection Act</i> is renewed
2000
<ul style="list-style-type: none"> - Canada-Wide Standards (CWS) (release limits) are developed for mercury, particulate matter, ozone, and benzene, and are being developed for dioxins/furans. - Canadian Strategic Options Processed (SOPs) are under development for the Iron and Steel Manufacturing sector and finalized for the Wood Preservation sector - 6/19/00 EC solicits public comments on proposed amendments to the PCB regulations under CEPA
2001
<ul style="list-style-type: none"> - 2/19/01 Canada announces \$120.2 million in new regulatory and other measures to accelerate action on clean air - 7/7/01 A notice with respect to Polychlorinated Biphenyls in Automotive Shredder Residue is published in the <i>Gazette, Part I</i>, for automobile shredding facilities that generated PCB-contaminated residue during 1998, 1999, or 2000. - EC proposes amendments to the Chlorobiphenyl Regulations and Storage of PCB Material Regulations promulgated in 1977 and 1992, respectively - Canada's PCB Waste Export Regulations (SOR/97-108) are being amended
2005
<ul style="list-style-type: none"> - 6/05 CCME accepts in principle a draft CWS for the coal-fired electric power generation sector. Final endorsement of the CWS is expected prior to the end of 2005.
2006
<ul style="list-style-type: none"> - 11/04/06 Proposed Canadian PCB regulations are published in the <i>Canada Gazette I</i>.



EC Activities
1999 and Earlier
<ul style="list-style-type: none"> - Ontario “Drive Clean” program - 1/99 The Canadian <i>Dioxins and Furans and Hexachlorobenzene Inventory of Releases</i> is finalized. - EC upgrades and digitizes its National PCB database
2000
<ul style="list-style-type: none"> - Draft HCB, B(a)P (PAH), and OCS release inventories for Ontario are updated and circulated for review - EMA with Algoma Steel being finalized. - EC, in coordination with the Hearth Products Association, conducts testing of conventional and US EPA-certified wood stoves to investigate releases of dioxins/furans, PAHs, HCB, and particulate matter
Other Activities
1998 and Earlier
<ul style="list-style-type: none"> - CEC issues Continental Pollutant Pathways Initiative - 7/98 UNEP POPs negotiations initiated
1999
<ul style="list-style-type: none"> - Under the GLWQA, The Lake Ontario LaMP Stage 1 report is released - By the end of 1999, emission control retrofits either completed or underway at all large MWC in the U.S. - The initial <i>Great Lakes Regional Air Toxics Emissions Inventory</i>, using 1993 data, is released - The Lake Ontario LaMP Update 1999 is released
2000
<ul style="list-style-type: none"> - Under the GLWQA, Canada and the U.S. work on restoring beneficial uses to 43 AOCs in the Great Lakes Basin through the RAP program - The Lake Erie, Lake Michigan, and Lakes Superior LaMPs 2000 are released - The Lake Ontario Lamp Update 2000 is released - The Lake Huron Initiative Action Plan is released - Numerous pilot projects and pollution prevention/reduction agreements relevant to toxics of concern are underway with the steel, automobile, and other manufacturing industries and utilities in Ontario and the U.S. Great Lakes states - 11/8/00 – 11/9/00 Atmospheric deposition workshop held, <i>Using Models to Develop Air Toxics Reduction Strategies</i> - 12/00 Final POPs negotiations - The 1996 Great Lakes Inventory of Toxic Air Emissions is prepared by the Great Lakes Commission
2001
<ul style="list-style-type: none"> - 2/01 21st session of the UNEP Governing Council is held: UNEP will undertake a global study on the health and environmental impacts of mercury - 8/22/01 The IJC issues a Review of Progress under the Canada-United States Great Lakes Binational Toxics Strategy - Monitoring of air deposition of toxic pollutants in the Great Lakes Basin under IADN
2002
<ul style="list-style-type: none"> - Monitoring of air deposition of toxic pollutants in the Great Lakes Basin continues under IADN



2003
- 9/19/03 – 9/20/03 IJC 2003 Great Lakes Conference and Biennial Meeting in Ann Arbor, MI - Monitoring of air deposition of toxic pollutants in the Great Lakes Basin continues under IADN
2004
- 4/23/04 Great Lakes Commission releases 2001 Great Lakes Regional Air Toxic Emissions Inventory, available online at www.glc.org/air - 10/6/04 – 10/8/04 State of Lakes Ecosystem Conference (SOLEC) held in Toronto, Ontario
2006 and Ongoing
- 11/01/06 – 11/03/06 State of Lakes Ecosystem Conference (SOLEC) held in Milwaukee, WI - Monitoring of air deposition of toxic pollutants in the Great Lakes Basin continues under IADN



Showey Lady Slipper
Shell Preserve, Hammond, Indiana
Photo by Karen Holland, US EPA