

**Great Lakes
Binational Toxics Strategy
HCB/B(a)P Workgroup Meeting**

**May 17, 2006
Toronto, Ontario**

Hexachlorobenzene Benzo(a)pyrene

Work Group Co-Chairs:

Tom Tseng, Environment Canada

Steve Rosenthal, U.S. EPA

HCB/B(a)P Challenges

Canada

- Seek a 90% reduction in releases
- By 2000

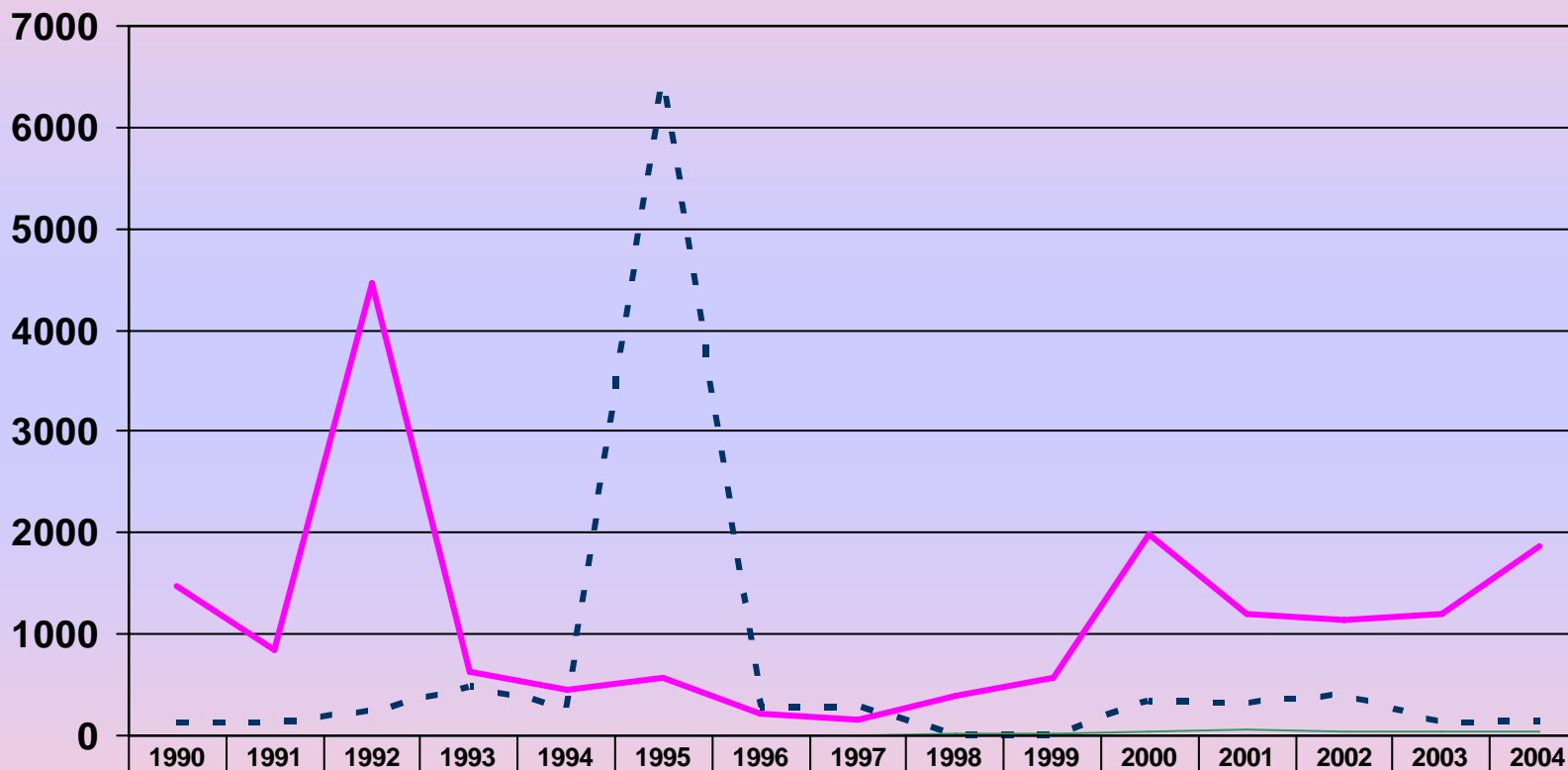
- HCB Progress: 68% reduction in Ontario
- B(a)P Progress: 45% reduction in Ontario (from 1988 baseline)

United States

- Seek reductions in releases that are within, or have the potential to enter, the Great Lakes Basin
- By 2006

- HCB Progress: Reductions from 1990 to 1999, but inventories not comparable; 28% reduction from 1999 to 2002
- B(a)P Progress: 77% reduction in GLs states from 1996 to 2001

U.S. HCB TRI-Reported Emissions (lbs/yr), 1990-2004

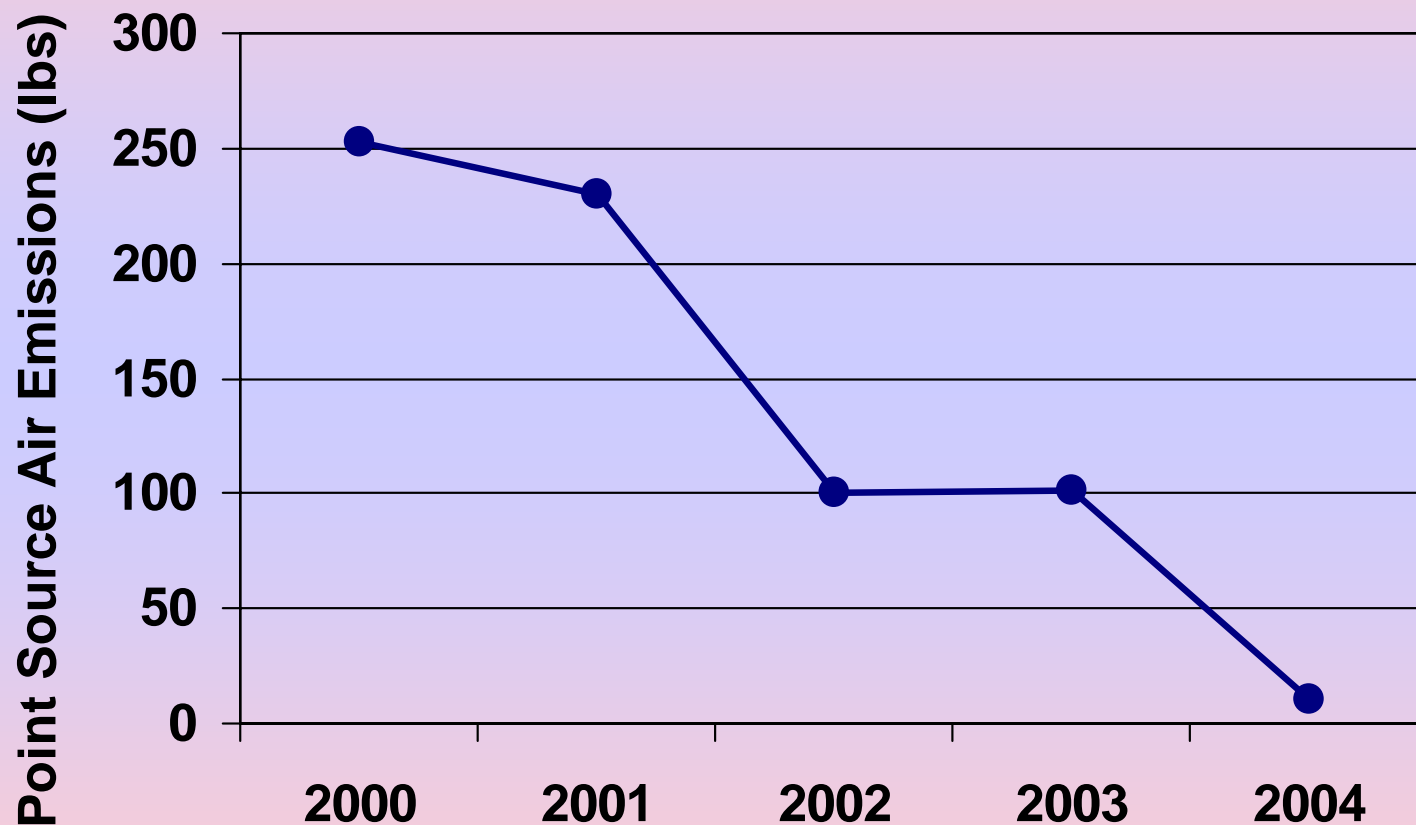


— Air	1468	841	4471	636	458	566	220	154	386	571	1994	1199	1138	1197	1869
- - - Water	124	111	227	476	269	6458	274	276	4	8	331	322	397	120	133
— Facilities	8	9	7	7	8	7	8	7	13	12	46	50	47	49	45

TRI Success Stories

- **Syngenta Crop Protection (St Gabriel, LA)**
 - ◆ **96% Reduction in stack emissions from 253 lbs in 2000 to 10 lbs in 2004**
- **Dow Chemical Louisiana Division (Plaquemine, LA)**
 - ◆ **Consistent decline in fugitive air emissions from 74 lbs in 2001 to 19 lbs in 2004**
- **DuPont Johnsonville Plant (New Johnsonville, TN)**
 - ◆ **Decline in water releases from 160 lbs in 2000 to 1 lb in 2004**
- **Solutia Inc. Delaware Riverplant (Bridgeport, NJ)**
 - ◆ **Ongoing reductions in fugitive air emissions from 42 lbs in 2000 to 2.5 lbs in 2004**

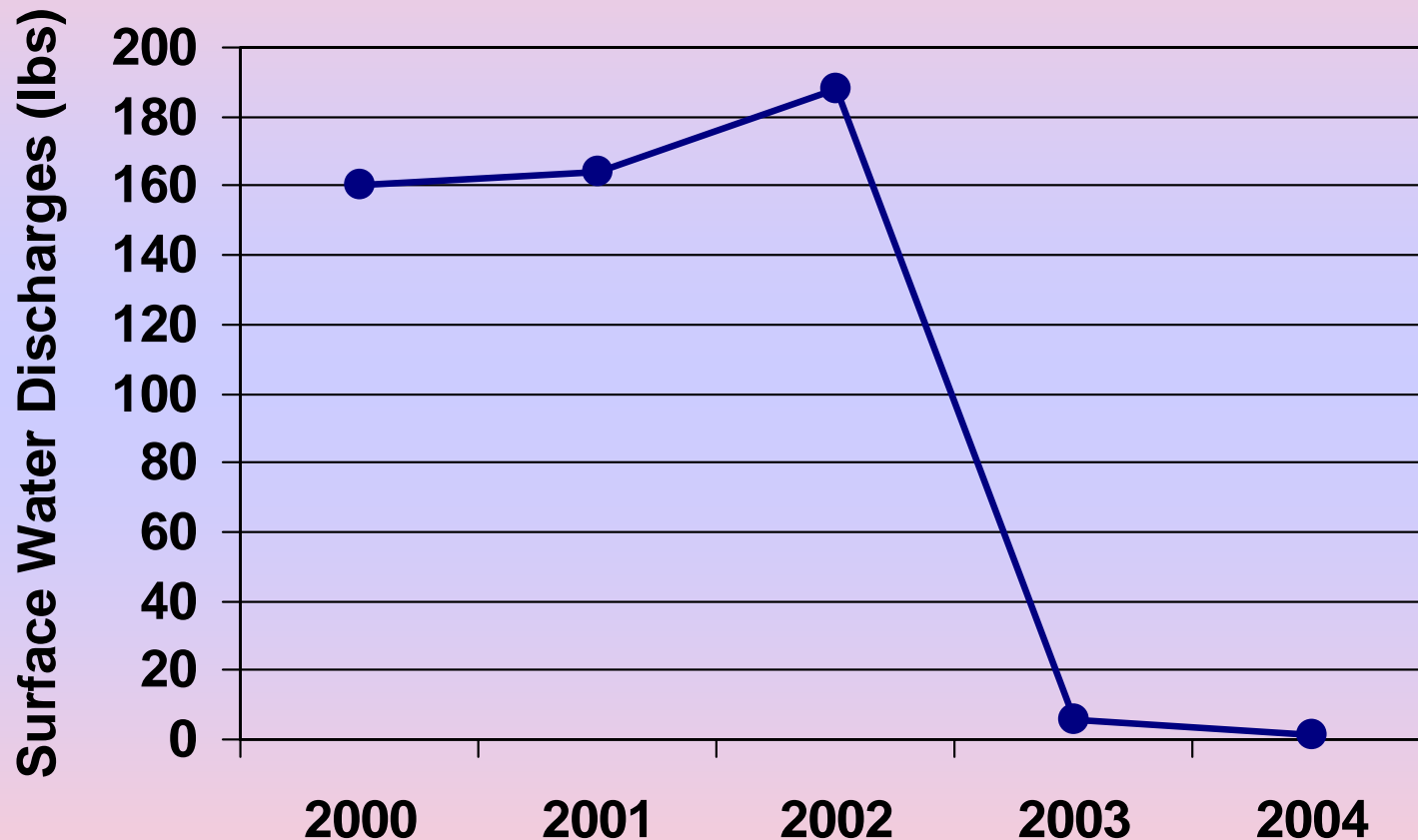
Syngenta– Saint Gabriel Facility



Syngenta Success Story

- Invested about \$1M to improve natural gas quality to production unit at St. Gabriel facility
- Benzene, a trace impurity in natural gas, that "makes it through" the first process is converted to HCB in subsequent processes and is emitted through dryer vent or leaves with the product
- Reduction in benzene level in the incoming raw material saw a five fold reduction in HCB production and consequent release
- Reduction is permanent; will remain in the 10- 20 lb/yr range depending on production volumes

DuPont Johnsonville Plant Facility



New Facility Reporting in 2004 – Westlake Vinyls, Inc.

- **Located in Calvert City, KY**
- **Reported HCB for the first time in 2004**
 - ◆ **700 lbs in stack emissions**
- **Spoke to Westlake representative; currently awaiting follow-up response**

Status Quo? Or Can We Do Better?

- **PPG Industries Inc. (Westlake, LA)**
 - ◆ **Reported 60 lbs of fugitive air emissions every year since 2001**
- **Colstrip Steam Electric Station (Colstrip, MT)**
 - ◆ **Reported ~12 lbs of stack emissions every year since 2000**
- **WA Parish Electric Generating Station (Thompsons, TX)**
 - ◆ **Reported 11-14 lbs of stack emissions every year since 2000**
- **Detroit Edison Company - Monroe Power Plant (Monroe, MI)**
 - ◆ **Reported ~13 lbs of stack emissions every year since 2000**

2002 NEI HCB Estimates (lbs/year)

SOURCE	2002 NEI EMISSIONS	% OF TOTAL
Pesticide Application: Agricultural	603.6	29%
Open Burning - Residential Household Waste	347.5	17%
Tires and Inner Tubes	323.5	15%
Refuse Systems	291.7	14%
Industrial Organic Chemicals	192.8	9%
Pesticides and Agricultural Chemicals	105.4	5%
Electric Services	84.2	4%
Other	145.1	7%
TOTAL	2,093.8	100%