

Great Lakes Binational Toxics Strategy Stakeholder Forum

**December 4, 2008
Hyatt Regency O'Hare
Rosemont, Illinois**

Mercury

Work Group Co-Chairs:

Alexis Cain, U.S. EPA

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Canada's Mercury Reduction Challenge and Progress

Challenge:

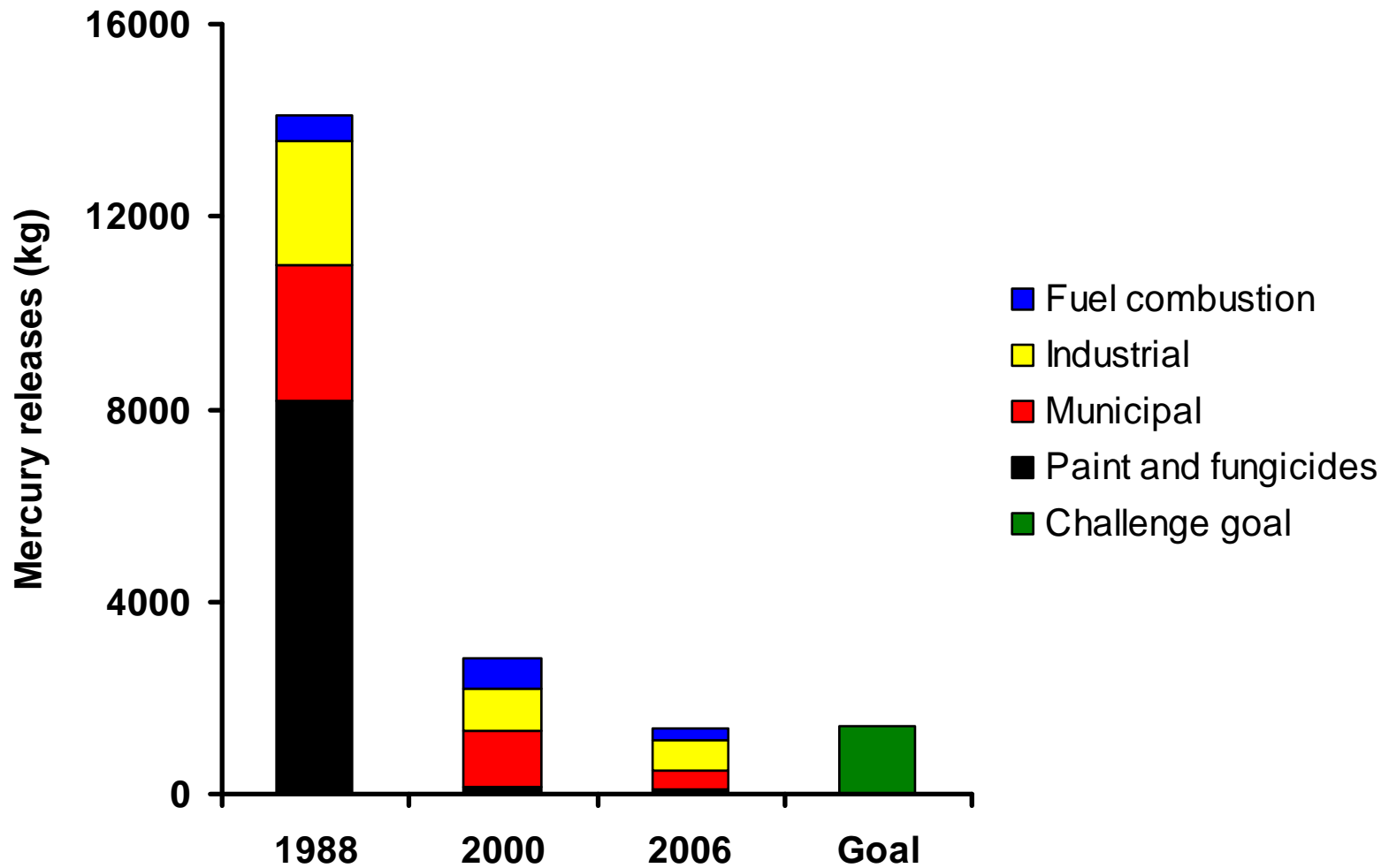
“Achieve by 2000, a 90% reduction in the release of mercury, or where warranted the use of mercury, in the Great Lakes Basin”

Baseline: 1988

Progress:

- **Reduction > 90%** (as of 2006)

Ontario Mercury Releases



U.S. Mercury Reduction Challenge and Progress

Challenge:

“Achieve by 2006 a 50% reduction in use and air emissions of mercury nationwide”

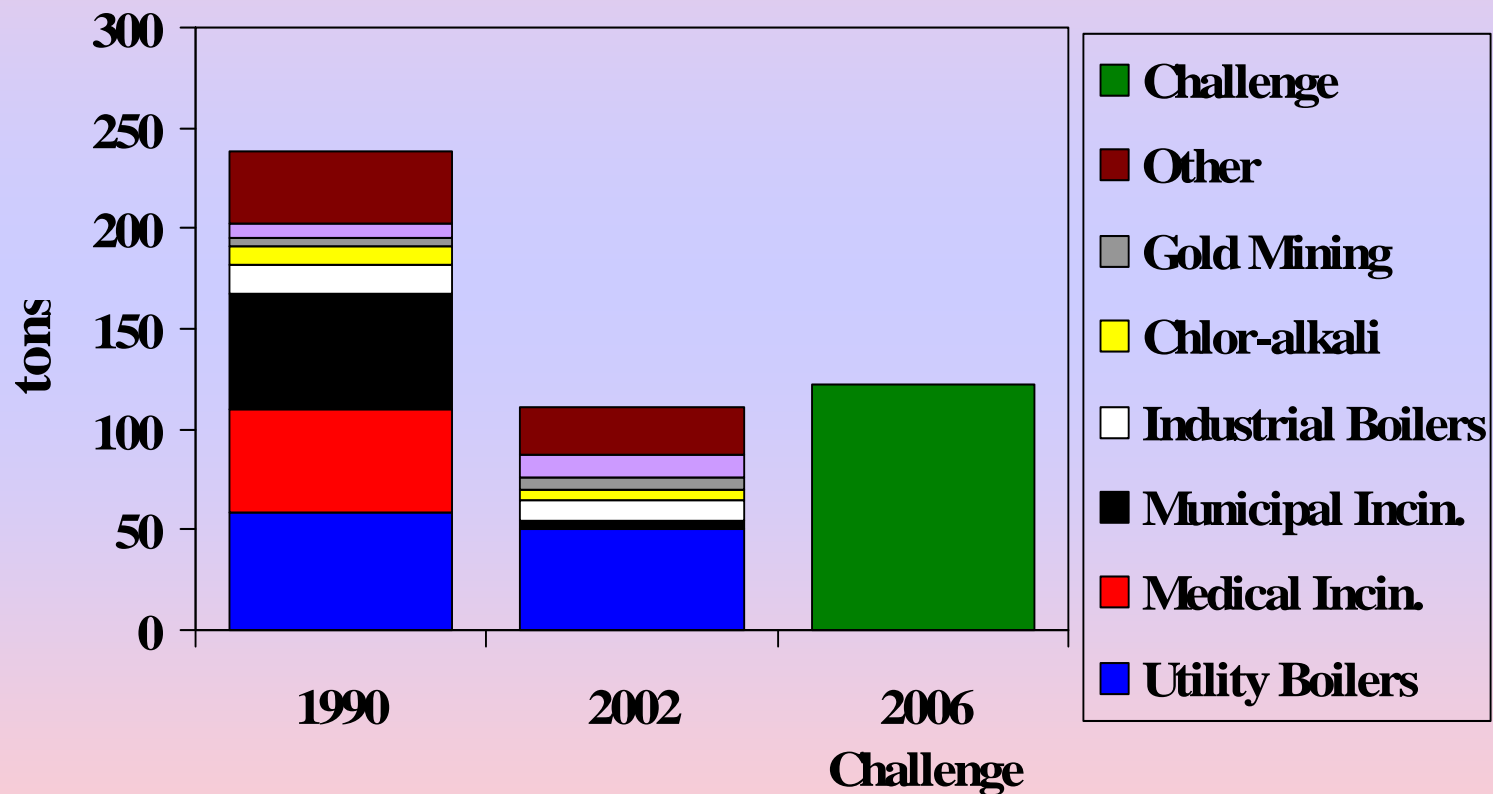
■ Baselines:

- ◆ Emissions: 1990
- ◆ Use: 1995

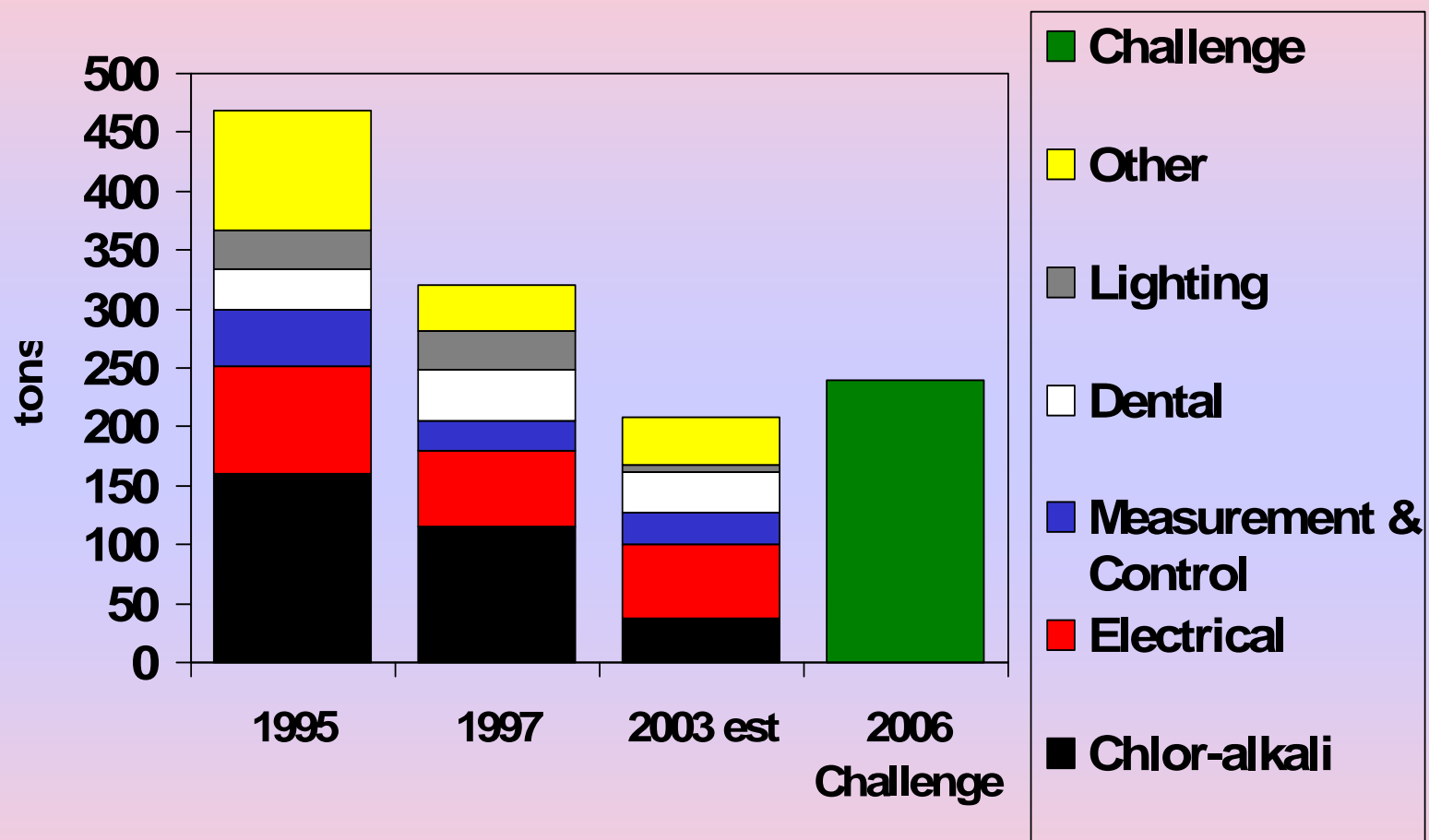
Progress (best guess):

- Emissions: **> 50% reduction** (as of 2002)
- Use: **> 50% reduction**

US Mercury Emissions: 2006 Challenge, 1990 Baseline



U.S. Mercury Use



Source: US Geological Survey, *Minerals Yearbook*, 1996, 1997. Chlorine Institute Annual Report to EPA, 2004; National Electrical Manufacturer's Association, direct communication, 2004.

Accomplishments (1996-2008)

- **Inventories of releases/emissions**
- **Chlor-Alkali Sector**
- **Health Care Sector**
- **Dental Sector**
- **Mercury Containing Products**
 - ◆ **Thermometers, Thermostats, Lamps**
 - ◆ **Collection Programs**
- **Mercury in Scrap**
 - ◆ **Auto Switches**
 - ◆ **Appliances**
- **Links to National/International Programs**
 - ◆ **Federal Regulation**
 - ◆ **CEC**
 - ◆ **UNEP**
- **Tracking Environmental Progress/Science**

Accomplishments

Example 1 - Chlor-Alkali

- **1996 – Chlorine Institute voluntary commitment to reduce mercury use by 50%**
- **2007 annual report – 97% reduction in mercury used by Chlor-Alkali industry was reported**

Accomplishments

Example 2 - Mercury in Scrap

- **1995-2000 – various studies of significance of releases from auto switches (MN, MI, NY, Recycling Council of Ontario, Pollution Probe)**
- **1995-2001 – various pilot programs – removal and end-of-life management (e.g. “Switch Out” program launched in Ontario 2001)**
- **2002**
 - ◆ **AMRC assessment of releases from appliances in Ontario**
 - ◆ **AMRC Instruction Manual and video**
 - ◆ **Niagara pilot**
- **2003 – North American Vehicle Manufacturers phase out use of mercury switches in convenience lighting and ABS**
- **2006 – National Vehicle Mercury Switch Recovery Program (U.S.)**
- **2007 – Pollution Prevention Planning Notice for mercury Switches (Canada)**

Accomplishments

Example 3 - Dental Sector

- **1996-2000**
 - ◆ **Evaluation of amalgam separators (e.g. ADA, Toronto)**
 - ◆ **Pilot Programs (Duluth, Toronto)**
 - ◆ **Best Management Practices (Dental Associations, Gov't, Universities and Colleges)**
- **1998-2004 studies of dental mercury discharges (Environ, Univ. of Toronto, Naval Institute for Dental and Biomedical Research)**
- **2001**
 - ◆ **City of Toronto By-Law**
 - ◆ **Canada Wide Standards – EC/CDA Memorandum of Understanding**
- **2003 – Ontario Reg. 196/03 requiring installation of amalgam separators**

Next Steps

- **Continue information sharing about cost effective reduction opportunities**
- **Tracking of Environmental Progress**