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National Priority Chemicals Trends Report (2004-2006)

Executive Summary

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EXECUTIVE SUMMARY

Progress Toward Our GPRA* Goal of Reducing 4 Million Pounds of Priority Chemicals by 2011

Through Fiscal Year 2007 (ending September 30, 2007), NPEP partners reduced more than three million pounds of Priority Chemicals (PCs). EPA continues its progress toward its goal: *By 2011, reduce 4 million pounds of priority chemicals from waste streams as measured by National Partnership for Environmental Priorities (NPEP) contributions, Supplemental Environmental Projects (SEPs), and other tools used by EPA to achieve priority chemical reductions.* Progress towards this goal is measured using current data for voluntary reductions reported by the Agency's 140-plus partners in the National Partnership for Environmental Priorities (NPEP) program.

In the past, we used TRI data to track progress toward the GPRA goals. We now rely on actual reduction achievements reported to us by the NPEP partners to measure progress toward the goal, rather than TRI data. Chemical reductions achieved under the NPEP program cannot be easily compared to the quantities reported to TRI. Therefore, we use TRI data in this Report only to show PC trends that can help the Agency and its partners to better focus their waste minimization efforts.

Trends for 2004–2006 For All Reported Priority Chemicals

Historical Progress: For 2006, industrial and federal facilities reported approximately 76 million pounds of PCs, representing a decrease of approximately 6.8 million pounds, or 8.0 percent, compared to the approximately 82.6 million pounds generated** in 2005. This decreased quantity, based on reports submitted by facilities to the Toxics Release Inventory (TRI), follows an increase of approximately 12.6 million pounds from 2004–2005. Our ability to determine the reasons for these year-to-year changes are limited, but we know, for example, that changes in the economy affect production and thus, the quantity of PCs generated. Closing facilities also affect the quantity of PCs generated. When they clean-out their tanks and pipes, they often produce large one-time waste volumes. Likewise, facilities that periodically clean their product and waste storage facilities generate more than their normal quantities of PCs. We have increasingly observed that facilities are installing more sensitive flow measuring equipment and/or using improved laboratory analyses that more accurately detect and measure the concentration of chemicals in industrial streams. This increased detection capability can significantly affect the quantities of PCs generated.

TRI Reporting Year	2004	2005	2006
Total Quantity of PCs (pounds)	69,964,280	82,591,864	75,957,896
Number of TRI Facilities Reporting PC Quantity	5,524	5,458	5,283

Analyses of Chemical Quantities

- Four PCs accounted for 86% of the total quantity of PCs generated in 2006:

Largest Quantity PCs in 2006	Lead and lead compounds (Lead)	Naphthalene	Polycyclic aromatic compounds (PACs)	Hexachloro 1,3-butadiene	Total of these Four PCs
Pounds	36,270,099	13,755,764	7,968,088	7,081,116	65,075, 066
Percentage of National Total PC Quantity	47.8%	18.1%	10.5%	9.3%	85.7%

- Largest Increases in Quantities (2005–2006):

Anthracene	Cadmium and Cadmium Compounds	1,2,4-trichlorobenzene	Benzo(g,h,i)perylene
1.8 million pounds	342,000 pounds	101,000 pounds	96,000 pounds

*The Government Performance and Results Act of 1993 (GPRA) directs federal departments and agencies to create strategic plans and goals. For more information see Section 2 in this Report, and see Goal 5 in the 2006–2011 EPA Strategic Plan at http://www.epa.gov/ocfo/plan/plan.htm.

**In this Report, "generated" means that a facility, as a result of manufacturing, processing, or otherwise using a Priority Chemical, produced a waste containing one or more Priority Chemicals, and managed that waste using disposal, energy recovery, or treatment methods.

- Largest Decreases in Quantities (2005–2006):

Naphthalene	Hexachloroethane	Polycyclic aromatic compounds (PACs)	Hexachlorobenzene
(3.5 million pounds)	(1.3 million pounds)	(1.1 million pounds)	(1.1 million pounds)

2006 PC Management Methods[***]:

- Total non-recycled PC quantity: approximately 76.0 million pounds
- Disposal: approximately 38.7 million pounds or 51% of total non-recycled quantity of PCs generated.
- Treatment: approximately 25.5 million pounds or 34% of total non-recycled quantity of PCs generated.
- Energy recovery: approximately 11.7 million pounds or 15% of total non-recycled quantity of PCs generated.

2006 PCs in States:

- Facilities in five states accounted for approximately 52% of the total quantity of PCs generated:
  - Louisiana: 16.7%
  - Texas: 13.7%
  - Indiana: 8.6%
  - Kentucky: 6.4%
  - Alabama: 6.4%

2006 PCs in Industry Sectors:

- Facilities in approximately 350 different North American Industry Classification System (NAICS) codes reported generating PCs.
- Facilities in 24 NAICS codes accounted for approximately 90% of the total quantity of PCs generated; facilities in three NAICS codes accounted for approximately 46% of the total quantity of PCs:
  - NAICS code 325181 (Alkalies and Chlorine Manufacturing): 17.7%
  - NAICS code331492 (Secondary Smelting, Refining, and Alloying of Nonferrous Metal (except Copper and Aluminum): 15.0%
  - NAICS code 331111 (Iron and Steel Mills): 13.3%

2006 PCs in Federal Facilities:

- 197 federal facilities reported approximately 5.2 million pounds of five PCs (lead/lead compounds, naphthalene, mercury/mercury compounds, polychlorinated biphenyls, and polycyclic aromatic compounds). Eight federal facilities accounted for 50 percent of the total quantity of PCs generated.
- Department of Defense (DOD) and Department of Energy (DOE) facilities accounted for the vast majority of PCs reported by federal facilities, including approximately 96 percent in 2006; lead and lead compounds reported by these facilities accounted for approximately 95 percent of the total quantity of all PCs reported by federal facilities.

Data derived from the 2005 Hazardous Waste Biennial Reports (BR):

- BR hazardous wastes contained approximately 450 million pounds of the 10 PCs highlighted in this Report (see Section 4). Lead accounted for approximately 430 million pounds or 96 percent. Mercury and cadmium accounted for approximately 16 million pounds or 3.5 percent of this quantity.
- The five industries highlighted in this Report (see Section 6) accounted for approximately 104 million pounds of PCs contained in reported BR hazardous wastes, Lead reported in wastes generated by iron and steel mills and secondary smelting, refining, and alloying of nonferrous metals facilities accounted for approximately 95 percent of this quantity of PCs.

***For 2006, approximately 532 million pounds of PCs were recycled, other than by burning for energy recovery. In this Report, recycled quantities are shown distinct from non-recycled quantities and are not included in our management method totals or percentages. We provide recycled PC quantities only to show the often impressive extent to which PCs are already managed in this manner in lieu of land disposal, treatment, or energy recovery.