



Explore, enjoy, and protect the planet

# Power Plant Poisons from Fossil Fuel Combustion

## **Air Toxics & the Clean Air Act**

The Environmental Protection Agency (EPA) has designated certain chemical pollutants as “air toxics” or “hazardous air pollutants.” These 188 pollutants cause cancer or other serious human health effects, such as reproductive problems, asthma, and birth defects. They also cause serious adverse environmental and ecological problems such as acid rain, food-chain contamination (bioaccumulation), and smog formation.

## **EPA Bait-&-Switch**

In the 1990 Clean Air Act amendments, Congress directed the EPA to set tough emissions standards for industries which are major contributors to toxic air pollution. Under public pressure, the EPA agreed to issue standards for fossil-fuel power plants by the end of 2004. But instead, in 2005, the EPA pulled a bait-&-switch. The EPA claimed that power plants were not a big pollution problem after all and they walked away from their legal duty to set air toxics limits on power plant emissions! Instead, they issued watered-down rules that relaxed the pending mercury standards and eliminated pending standards for other air toxics.


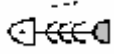

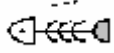
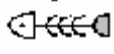

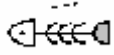
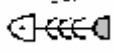

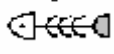



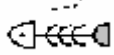
## **The Sierra Club Fights Back**

In 2006, the Sierra Club, represented by Earthjustice, challenged the EPA in a federal lawsuit for their failure to regulate power plant air toxics. By just walking away from their obligation to set limits on air toxics, the EPA has abandoned the millions of Americans adversely affected by power plant poisons. The Sierra Club is asking the courts to turn EPA around and put them back to work so that America’s families and our nation’s fish and wildlife get the protection they need and deserve.

## **What you can do**

- Use your knowledge about Power Plant Poisons as a springboard to action.
- Start in your own neighborhood. Demand an end to toxic metals, arsenic, dioxin, acid gases and food chain poisons from power plants.
- Educate others. Organize a game of “Pin the Pollutant on the Power Plant.”
- Try Sierra Club’s Smart Energy Solutions: [www.sierraclub.org/energy](http://www.sierraclub.org/energy)

## POWER PLANT POISONS from FOSSIL FUEL COMBUSTION<sup>1</sup>

|           | AIR TOXICS                     | Power Plant Air Emissions <sup>2</sup> (Tons) | Power Plant Portion of All Industrial Air Emissions | Human Carcinogen <sup>3</sup><br>(Known or Probable)                                                 | Acid Gas Formation                                                                    | Food Chain Poison <sup>5</sup>                                                        |
|-----------|--------------------------------|-----------------------------------------------|-----------------------------------------------------|------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------|
| METALS    | Chromium compounds             | 78.5                                          | 31%                                                 | K <sup>4</sup><br> |                                                                                       |    |
|           | Cobalt compounds               | 16.5                                          | 52 %                                                |                                                                                                      |                                                                                       |                                                                                       |
|           | Lead compounds                 | 87.5                                          | 22 %                                                | P<br>              |                                                                                       |    |
|           | Manganese                      | 156.5                                         | 19 %                                                |                                                                                                      |                                                                                       |                                                                                       |
|           | Mercury                        | 46.5                                          | 74 %                                                |                                                                                                      |                                                                                       |    |
|           | Nickel compounds               | 259.5                                         | 59 %                                                | K<br>              |                                                                                       |    |
| NONMETALS | Selenium compounds             | 253.5                                         | 92 %                                                |                                                                                                      |                                                                                       |   |
|           | Arsenic compounds              | 46                                            | 75 %                                                | K<br>            |                                                                                       |  |
|           | Hydrochloric acid              | 257                                           | 91 %                                                |                                                                                                      |  |                                                                                       |
|           | Hydrogen fluoride              | 31                                            | 83 %                                                |                                                                                                      |  |                                                                                       |
|           | Dioxin & dioxin-like compounds | 605.6 grams                                   | 48%                                                 | K<br>            |                                                                                       |  |

1. US EPA has designated 188 Air Toxics (“hazardous air pollutants”). Power plants burning coal, oil, and to a lesser extent natural gas pump out the lion’s share of the Air Toxics listed here.
2. Figures are from US EPA’s 2005 Toxic Release Inventory.
3. U.S. Dept. of Health & Human Services. National Toxicology Program. 2005. Report on Carcinogens, 11th Edition.
4. The Chrome VI form is a known human carcinogen.
5. Persistent Bioaccumulative Toxic Chemical