

Measuring Your Impact 15 Mercury Release from Coal

Coal-burning power plants are the largest source of mercury emissions in the United States.

Coal Type	Mercury concentration ($\mu\text{g/g}$)	Amount used per year (million metric tons)	Total mercury emissions (tons/year)
U.S. average	0.1	1.5	
High-mercury coal	0.5	1.5	
Low-mercury coal	0.04	1.5	

Coal contains impurities at a wide range of concentrations. The average mercury concentration in typical coal found in the United States is approximately $0.1 \mu\text{g/g}$. A concentration of $0.5 \mu\text{g/g}$ is toward the higher end of the range. A concentration of $0.04 \mu\text{g/g}$ is at the lower end of the range.

- Fill in the table above to calculate the amount of mercury released by a typical coal-burning power plant that burns 1.5 million metric tons of coal per year. Observe the difference in mercury released depending on the mercury concentration of the coal burned.
- Assuming that the power plant burns coal with average mercury content and serves 100,000 households, each with roughly equal energy consumption, how much mercury (in grams) can be attributed to each household per year?
- Identify three different ways you could reduce mercury emissions from coal-burning power plants.