



Mercury Emission Calculation Methods

The Minnesota Pollution Control Agency requests that you use the following hierarchy of mercury emission calculation methods, which ranks methods from most preferred to least preferred:

- 1. Continuous Mercury Monitor**
- 2. Stack test-determined mercury concentrations in flue gas**
Stack test should have been performed within the past ten (10) years.
- 3. Mercury content of fuel calculated using American Society Testing Materials methodologies combined with control efficiency.**
Fuel quantity X Mercury concentration in lb/units of fuel burned X (1-control efficiency)
= Lbs of Hg emissions/year
- 4. Factor obtained from WebFIRE; the Environmental Protection Agency's online version of the Factor Information Retrieval database:**
<http://cfpub.epa.gov/oarweb/index.cfm?action=fire.main>.
- 5. Factors developed by the Electric Power Research Institute**
These factors include averaged control efficiency so you should **not** factor in your own estimate of the pollution control you are receiving.

Subbituminous coal (factor published 11/01)

4.29 lbs mercury/trillion Btu burned (this is a Minnesota average)

7.722 X 10⁻⁵ lb mercury/ton burned (this is a Minnesota average)

Bituminous coal (factor published 12/96)

1.38 lbs mercury/trillion Btu burned

3.588 X 10⁻⁵ lb mercury/ton burned

Lignite coal (factor published 12/96)

10.81 lbs mercury/trillion Btu burned

1.557 X 10⁻⁴ lb mercury/ton burned

Fuel oil (factor published 12/96)

0.46 lb mercury/trillion Btu burned

6.44 X 10⁻⁵ lb mercury/1000 gallons burned

Natural gas (factor published 12/96)

0.0008 lb mercury/trillion Btu burned

8.4 X 10⁻⁷ lb mercury/million cubic feet burned

6. Other

This includes methods that differ from those outlined above. Please describe your calculation method in detail if you choose this option and specify what control efficiency, if any, you are applying.

Control equipment abbreviations

Control technology	Abbreviation
Primary particulate removal devices	
Venturi scrubber	VS
Hot-side Electrostatic Precipitator	ESPh
Cold-side Electrostatic Precipitator	ESPc
Fabric Filter	FF
Fluidized Bed Combustors-fabric filter	FBC-FF
Spray Dryer/fabric filter	SD-FF
Spray Dryer/cold-side ESP	SD-ESPc
Integrated Gasification Combined Cycle	IGCC
Wet Flue Gas Desulfurization (FGDw) Systems after Primary Particulate Control Devices	
After cold-side ESP	ESPc-FGDw
After hot-side ESP	ESPh-FGDw
After fabric filter	FF-FGDw