



Draft Rule on Mercury Air Emissions Reporting and Reduction

Background

The goal of this rulemaking is to have fish we can eat. Minnesota's Statewide Mercury Total Maximum Daily Load (TMDL) study evaluated surface waters contaminated by mercury. The study established pollution reduction goals for facilities within Minnesota to do their share to restore surface waters to meet water quality standards. The TMDL was approved by U S Environmental Protection Agency (US EPA) in 2007. The TMDL study establishes a target of no more than 789 lbs/yr of mercury air emissions by 2025 for sources in Minnesota. These proposed rules are to carry out the mercury reduction activities identified in the Minnesota Statewide Mercury TMDL Implementation Plan.

Stakeholder involvement

The TMDL Implementation Plan (October 2009) was developed with significant stakeholder input. The Minnesota Environmental Initiative convened a stakeholder group including representatives from wastewater treatment facilities, Native American Tribes, local government units, mining and power industries, and environmental groups. During development of the Implementation Plan, stakeholders determined that a more formal approach to reduce mercury air emissions was needed through rulemaking.

A variety of opportunities were provided for public participation and stakeholder input throughout the rule development process. Early efforts started with a public notice of a Request for Comments on the planned new rules and meetings with the TMDL Implementation Plan stakeholders. A preliminary draft rule and related documents were placed on the MPCA's web site and a stakeholder meeting was held in July 2012. The MPCA communicated and met with interested parties about the rule including the electric utility, iron and steel, taconite and mercury recycling sectors; environmental groups; tribal government representatives; the Minnesota Chamber of Commerce and environmental advocacy groups.

Proposed rules

The proposed rules fulfil the reduction activities called for in the Statewide Mercury TMDL Implementation Plan. The rules also require emissions reporting to improve the data on mercury emissions in Minnesota. Generally, the proposed rules impact stationary sources (total facility) with actual air emissions of mercury over 3 lbs/yr after controls.

Part 1 – Emission inventory for mercury

The proposed rules require facilities to submit a mercury emission inventory to the MPCA. The rules will require annual reporting from the facilities that meet the definition of a "mercury emission source." This impacts 35 or fewer facilities. For most, this is status quo – coal use and mercury from incineration is already reported. Some manufacturers, furnaces or kilns may need to report additional process data. The MPCA also currently compiles a voluntary mercury inventory every three years. Smaller sources, with actual emissions less than 3 lbs/yr, will continue with the three year inventory under the proposed rules.

If a unit emits more than 3 lbs/yr, baseline testing for mercury will be required unless the source is already required to test under another applicable requirement or permit. Periodic re-testing will be on a 5-year schedule. Stack testing for mercury typically costs \$10,000-\$15,000.

Part 2 – Mercury reduction plans

Facilities must prepare mercury reduction plans to meet their sector’s specified reduction target per the TMDL Implementation Plan, or justify why an alternative limit or reduction is appropriate. The rule specifies major elements to include in the reduction plan.

Category	Number of Sources	Likely Affected Sources Based on MPCA Data
Ferrous Mining or Processing (indurating and direct reduced iron furnaces)	7 facilities	Keewatin Taconite, Hibbing Taconite, ArcelorMittal, MinnTac, United Taconite, Essar, Mesabi Nugget, Northshore Mining
Iron Melting	1 facility	Gerdau Ameristeel
Industrial, Commercial and Institutional (ICI) Boilers (Units emitting 5 lbs/yr or more)	7 facilities	American Crystal Moorhead, American Crystal East Grand Forks, Southern Minnesota Beet Sugar Coop, Silver Bay Power at Northshore Mining, Hibbing Public Utilities, City of Virginia Public Utility, ADM Mankato
Sources Not Otherwise Identified (Units emitting 3 lbs/yr or more)	1-4 facilities	SJE Rhombus, Boise White Paper (lime kiln), Northern Tier Energy Refinery, Flint Hills Resources Refinery

A note about ICI boilers

The MPCA initially expected that federal regulations limiting mercury from ICI boilers would meet the TMDL targets for the sector. However, the final federal emission limits were higher than anticipated and would allow emissions from this sector to increase from baseline levels. Therefore, the rules propose reductions to meet the TMDL targets. To reduce mercury emissions, some facilities may be able to take simpler steps, such as changing their fuel mix. Others may require capital investment and related ongoing annual costs to operate air pollution controls. If all facilities were to add controls, the MPCA’s upper bound estimate of capital investment statewide is \$140 million, with a total upper bound annual cost of \$32 million for facilities that install activated carbon injection.

Part 3 – Performance standards

Certain facilities are already required to meet performance standards for mercury control. This portion of the rule does not impose any new emission reductions or costs beyond what is already required by state statutes or federal standards. The types of facilities included in this section of the rule are: Electric Generating Units; Commercial/Industrial Solid Waste Incinerators; Sewage Sludge Incinerators; Municipal Waste Combustors; Hospital Waste Incinerators; and other Solid Waste Incinerators. This part of the rule does the following:

- Adopts federal standards by reference.
- Adopts compliance method language consistent with federal requirements which is necessary as part of the MPCA’s program delegation from US EPA.