This file contains documents relevant to the Hg rule. Documents are listed sequentially by date order.

FOCUS OF RULE:
MERCURY TMDL IMPLEMENTATION FOR AIR EMISSION SOURCES

As a result of the final federal National Emission Standards for Hazardous Air Pollutant Sources (NESHAP) for industrial, commercial and institutional (or ICI) boilers finalized in January 2013, the Minnesota Pollution Control Agency (MPCA) is revising its draft mercury rule to require mercury reduction plans from ICI boilers that emit two pounds per year or more. This revision is needed because the ICI NESHAPs for major and area sources no longer control mercury to levels necessary for this mercury emission source type to achieve the reduction target of Minnesota's mercury Total Maximum Daily Load (TMDL) implementation plan.

This document contains draft rule language for mercury emissions reduction plans for industrial, commercial and institutional boilers. Draft rule language for mercury emissions reduction plans for other affected sectors was provided in the July 2012, Mercury Rule, preliminary draft #2.

In the draft rule language below, the MPCA has attempted to carry forward the strategies in the Implementation Plan for Minnesota's Statewide Mercury TMDL to meet the air goals established in Minnesota's Statewide TMDL for mercury. The Mercury TMDL Implementation Plan can be found at: http://www.pca.state.mn.us/tchyce1.

- **This document contains draft rule language that is currently being considered by the MPCA. This is not final language and it is the Agency's intent to seek formal comments from stakeholders during the formal public comment period on the proposed rule.**
- **Underlined text generally indicates proposed language.**

7007.0502 MERCURY EMISSIONS REDUCTION PLANS.

Subp. 6. **Mercury Control and Work Practices.** The owners or operators of a mercury emission source in a source category listed in this subpart and required to submit a Plan under subpart 4 shall include in the Plan the minimum mercury control requirement for source categories listed in this subpart.

(For text of items A – C of this subpart, see the July 2012, Mercury Rule, preliminary draft #2.)

D. For industrial, commercial and institutional (ICI) boilers, the reduction target is 70 percent control from 2005 mercury emissions at all ICI boilers that emit two pounds per year or more. For each ICI boiler at a mercury emission source, within one year of the effective date of this rule, the owner or operator must determine whether the reduction target of 70 percent is met at units that emit two pounds per year or more; and retain records of the determination on-site for five years from the date the determination was made.

(1) A reduction plan under this part is not required if:

a) actual mercury emissions from the ICI boiler, considering existing controls, are less than two pounds per year; or

b) actual mercury emissions from the ICI boiler are greater than two pounds per year and the reduction from 2005 mercury emissions considering existing controls is at least 70 percent.

(2) If actual mercury emissions are two pounds per year or more and emission control is less than 70 percent, the owner or operator must evaluate actual mercury emissions that will be achieved under the federal regulations incorporated at parts 7011.7050 or 7011.7055 relative to the 70 percent reduction target. If the emission limits, control equipment or operating practices under the federal regulations do not achieve the reduction target, the owner or operator must ensure that by January 1, 2018, mercury emissions are reduced by at least 70 percent from 2005 levels by one or more of the following control options:

a) install controls for mercury air emissions to improve overall particulate matter capture; or

b) apply activated carbon injection.

AGENDA

STAKEHOLDER INFORMATION MEETING
PRELIMINARY DRAFT #2 OF MERCURY AIR EMISSION RULE
July 31, 2012

Time: 9:30am – 11:30am
Location: St. Paul video conference room 4-1 and large Duluth videoconference room

Meeting Objective: Share draft language and clarify intent so that stakeholders are able to provide:

- verbal input at the meeting; and
- written, informal comments by August 24, 2012.

9:30am	Introduction and Goal of Meeting – Frank Kohlasch · Meeting Logistics · Purpose of rulemaking · Attendees introduce themselves · Introduce MPCA management and staff team
9:40am	Overview of Rule Process – Yolanda Letnes · Rule Schedule
9:50am	Overview of the draft rule: background and content – Barbara Jean Conti
10:10	Discussion: main sections of draft rule – Anne Jackson and Barbara Jean Conti · Questions and Stakeholder input by rule section 1. Definitions 2. Emission inventory and testing 3. Reduction Plans 4. Performance standards
11:25am	Next steps; closing thoughts – Frank Kohlasch
11:30am	Adjourn

WRITTEN COMMENTS ON PRELIMINARY DRAFT #2 OF MERCURY AIR EMISSION RULE
After the July 31, 2012, meeting, submit any additional stakeholder feedback (written) no later than August 24, 2012, to yolanda.letnes@state.mn.us

Please identify the rule parts you are commenting on, explain why you agree or disagree, suggest alternatives if possible, and provide specific examples to illustrate your ideas. Please note that we are gathering input informally at this point, and will not be responding in writing to comments received.

July 6, 2012

Mercury Rulemaking Draft Overview

Rulemaking goals:

1) to formalize and implement reduction activities called the statewide mercury TMDL; and
2) to improve the data on mercury emissions in Minnesota by establishing a schedule for facilities to inventory and report emissions to the MPCA.

Contents of Proposed Mercury Air Emissions Rule for Implementing the Statewide Mercury TMDL

1) Inventory Submittal (Minn. R. ch. 7019)

Applicability *(summary of applicability):*	· If stationary source meets the definition of "mercury emission source" (actual emissions after control are 3.00 lb/yr or more)
Description *(summary of key requirements, timing)* : Likely # of new reporting sources: ~3 (currently unpermitted)	· Annual reporting by April 1 o Smaller stationary sources (actual emissions less than 3 lb/yr) continue with 3-year inventory o Mercury emission sources that reduce emissions below 3.0 lb/yr will continue to submit annually until they are below 3 lb/yr for 3 years · In the absence of another applicable requirement for testing or CEMs: o Existing sources conduct initial (baseline) performance test on units where emissions are estimated to be 3 lb/yr or more (based on emission factors or other data) within 1 year of effective date. o New sources conduct initial (baseline) performance test within 120 days of startup o Subsequent tests every 5 years. Subsequent tests not required if actual emissions are less than 3 lb/yr for 3 years · Add calculation method for mercury mass balance · Allows MPCA to request quantification of mercury emissions if we have reason to believe actual emissions may exceed threshold (3 lb/yr)

2) Reduction Plan Submittal

ELEMENTS OF REDUCTION PLANS (Same for all categories)

- Applies if stationary source meets the definition of "mercury emission source" (actual emissions after control are 3.00 lb/yr or more)
- Exemptions:
  - Source is already subject to another enforceable requirement to control mercury (ie. EGUs, USSteel, sources subject to fed stand)
  - Combustion equipment that uses only natural gas, LPG and oil
- Plan will describe the specific control equipment, processes, materials or work practices to control mercury
- Propose a monitoring and record-keeping system
- Discuss the operational parameters necessary to optimize mercury control efficiency
- Control efficiency or the emission rate that each emission unit will achieve

- Date for final compliance with the reduction target (no later than 2025)
- Owners/operators may modify plan
- Owners/operators may propose alternative if the specified work practices/controls are not achievable
- Compliance with approved plan is required

Category/ # affected sources	**TMDL Implementation Plan submittal date**	**Category Actual lb/yr**	**Description of Sector-specific Plan Requirements**	**Notes**
Ferrous Mining or Processing: Affects indurating and direct reduced iron furnaces 11 units at 5-6 companies?	Plan due 6/302016 Reduction target deadline 2025	655 (2012 calc.)	-Submit plan Control so that emissions are 28% of 2010 emissions -Plan can be across unit, facility, multiple stationary facilities -Evaluate application of mercury CEM, esp if controls is for sorbent injection.	- Provided draft rule to mines on 3/6 - two separate reminders to all units -one response --SOC with USS in Keetac permitting commits the MPCA to establish an enforceable schedule for installing Hg controls at existing six taconite furnaces by 12/130/2018.
Lime Kilns 5-6 units Boise, Sappi, ACS, SoMN Beet	Plan due 6/30/2015 Final reduction target 2018	Paper – 6 (2010 calc) Sugar beets – 2 (2010 calc.)	-Minimum 70% control from feedstock (Hg concentration of lime)	Plan due in the unlikely event that current emissions gt 3 lbs.
Iron Melting (Gerdau; maybe also Badger Foundry?) 1-2	Plan due 6/30/2015 Reductions due by 1/1/2018 (5 years after rule adoption)	80 (2012 calculation)	-plan required to demonstrate how will achieve Hg emission rate 35 mg/ton Emission rate equal to limit adopted by NJ in 2007.	Federal NPRM was projected for 5/2012. NPRM is now delayed per 3/1/12 email from Donna Lee Jones, US EPA. Issues we are aware of: budget cut for contractor, need for data on white goods. Unlikely to have EPA std available to adopt by reference in current rule time frame.
Sources Not Otherwise Identified Placeholder in the event other existing emitters of mercury are found			· submit a Plan within 180 days of determination of being a mercury emission source · Plan to show that APCE, work practices, etc. minimize hg emissions	

3) Performance Standards

Category/ # affected sources	TMDL Implementation Date	Category Actual lb/yr	Federal Hg Performance Standard	Additional state requirements?	Notes
Electric Generating Units 34 units	Reduction targets Interim 2018 final 2025	833 (2012 calc.)	40 CFR Pt 63, subpart UUUUU (AKA "MATS")	Yes –need to address req't in EGU state statute & related continuous mercury emissions monitoring	General clarifications
Industrial/Commercial/Institutional (ICI) Boilers 33 units	2018	111 – ICI plus wood (2012 calc.)	40 CFR part 63, subpart DDDDD—major HAP sources 40 CFR Part 63 Subp. JJJJJJ—Area HAP sources	No	Incorporating by reference area source standard as "just in case"—(existing policy)
Commercial/Industrial Solid Waste Incinerators 1 unit will become a CISWI (Fibrominn)	NA	NA…to lte 3 lb/hr	40 CFR Part 60 Subp. CCCC (NSPS) 40 CFR Part 60 Subp. DDDD (emission guidelines)	No	This category develops because of the federal definition of fuel vs waste. MPCA can no longer treat Fibrominn as biomass boiler, but must treat as waste incinerator Will need to prepare 111(d) plan for existing unit
Sewage Sludge Incineration 7 units at three facilities—2 MCES facilities, City of Buffalo Lake	2020	9 (2010 calc.)	40 CFR Part 60 Subp. LLLL (NSPS) 40 CFR Part 60 subp. MMMM—(emission guidelines)	No	Will need to prepare 111(d) plan for existing units to be delegated implementation, enforcement authority

Category/ # affected sources	TMDL Implementation Date	Category Actual lb/yr	Federal Hg Performance Standard	Additional state requirements?	Notes
Lamp / mercury recyclers 2 current 1 expected (>227 collection sites)	Reduction target 2018	71 (2010 calc.)	NA	· Applies to "mercury emission source" · Collection facilities that aggregate more than 1000 lamps · Volume reduction/recycling o enclosed storage o negative pressure on processing area o dust control plus carbon filtration on processing area o specify control efficiencies o monitor for hg breakthrough o existing: test if requested o new: test within 180 days of startup	Reflects aspects of state of Florida rules and state of Wisconsin (previous permits)

4) Strategies for other TMDL Sectors/Sectors:

- **Petroleum refining** and use of petroleum based products – mass balance data submitted shows lower mercury emissions that estimated in the past. Will be subject to inventory requirements of final rule.
- **Crematories** – Research required to better quantify emissions. Work group formed. Awaiting to hear of EPA GLRI grant award status at Univ of MN Dental school.
- **Salvage yards and shredders** – Draft rule exempts facilities from preparing reduction plans if they follow requirements of industrial storm water permit's mercury management plan, TMDL implementation plan steps are met.

MPCA Rulemaking Project: Hg Rule

Stakeholder Videoconference Meeting (St. Paul and Duluth) for Focused Feedback

July 31, 2012

http://www.pca.state.mn.us/iryp4a1

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Agenda

- Introduction and Goal of Meeting
- Overview of Rule Process
- Overview of Rule (background)
- Overview of main sections of rule (brief)
- Discussion/walk through rule
  - Stakeholder Input
- Next Steps

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Introduction & Goal of Meeting

- Frank Kohlasch—Air Assessment Section Manager
- Mary Jean Fenske—Supervisor, Unit
- David Richfield—Supervisor, Agency Rules Unit
- MPCA Staff
- Meeting participants

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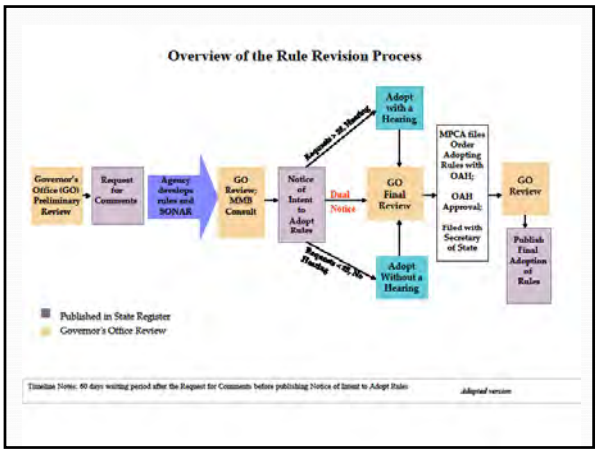

Overview of Rules Process:
Tentative Rule Schedule

- Request for Comments: 7/27/09
- Dual Notice (DN) – December 2012
- Final Adoption:
  - with hearing - 6 months after DN
  - w/o hearing - 3 months after DN

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Overview of rule: background

- Fish consumption advisories for mercury
- Total Maximum Daily Load (TMDL) study
  - Most mercury from atmosphere, someplace else
  - Minnesota will do it's part to get to 789 lb/yr goal
- TMDL Implementation Plan commits MPCA to rulemaking:
  - Collect annual report from emitting sources
  - Adopt federal standards for some sectors

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Rule development history

- Shared initial draft Nov 2010
- Shared revised sector language early 2012
  - Meetings and site visits
  - Comments considered
- Current draft sharing pre-public notice

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Overview of rule

- Sections of rule:
  - Definitions
  - Reduction plans
  - Performance standards
  - Emission Inventory and testing

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Overview of rule

- Definitions:
  - Coal, coal-fired, mercury
  - Mercury emission source:
    - Stationary source
    - 3 lb/yr or more
    - Actual emissions (after controls)
- Statewide target
  - 789 lb/yr in 2025

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Mercury reduction plans

- Exempt if other enforceable reduction in place
- Sectors:
  - Ferrous mining/processing
  - Lime kilns
  - Iron melting
  - Other sources not identified elsewhere

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Mercury reduction plans

- Meet recommended control or emission rate
  - Can propose alternative
- Describe equipment, work practices, monitoring, recordkeeping
- Plans due in 2015 or 2016
  - Achieve reduction no later than 2025

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Federal Performance standards

- Electric generating units
  - 40CFR63 subpart UUUUU ("MATS")
  - + CEM requirements for sources subject to Minnesota statutes
- Industrial, commercial & institutional boilers
  - 40CFR63 subparts DDDDD and JJJJJJ
- Commercial/Industrial Solid Waste Incinerators NSPS/EG
  - 40CFR 60 subparts CCCC and DDDD
- Sewage Sludge Incinerators
  - 40CFR 60 subparts LLLL and MMMM
- EG requires 111(d) plan

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State-only Performance Standards

- Recyclers of mercury
  - State-only standard
  - Based on Wisconsin, Florida standards

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Emission Inventory and Testing

- Annual reporting if "mercury emission source"
  - Smaller sources on 3-year cycle
- MPCA can request quantification of emissions
- Baseline and periodic testing if "mercury emission source"
  - If no other requirement for test or CEMs

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Next Steps

- Send comments regarding 7/31/12 meeting to Yolanda Letnes no later than 8/24/12 (yolanda.letnes@state.mn.us)
- MPCA staff will revise draft rule and finish SONAR
- Public notice expected: late 2012

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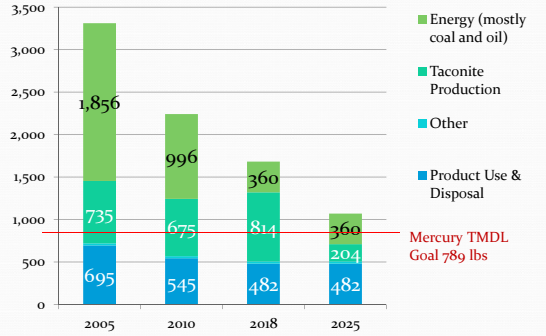
MN Mercury emission projection



Questions?
Stakeholder Input

Definitions
Inventory
Plans
Standards

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Thank you

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FOCUS OF RULE:
MERCURY TMDL IMPLEMENTATION FOR AIR EMISSION SOURCES

What is this document?

- **This document contains language that is currently being considered by the Agency. This is not final language and it is the Agency's intent to seek informal comments from stakeholders by making it available for informal comments.**
- **Note: Underlined text generally indicates proposed language. Not all existing language that remains unchanged is included to save space.**

CHAPTER 7005, DEFINITIONS AND ABBREVIATIONS

7005.0100 **DEFINITIONS**

Subp. 4 3b. Breakdown. "Breakdown" means a sudden and unavoidable failure of air pollution control equipment or process equipment to operate as designed.

Subp. 3c . **Coal.** "Coal" has the meaning given in Minn. R. ch. 7011.1100 subp. 2.

Subp. 3d. **Coal-derived fuel.** "Coal-derived fuel" means any fuel, whether in a solid, liquid, or gaseous state, produced by the mechanical, thermal, or chemical processing of coal.

Subp. 3e. **Coal-fired.** "Coal-fired" means any emission unit, emission facility or stationary source that uses any amount of coal or coal-derived fuel, alone or in combination with any amount of any other fuel.

Subp. 6a. **Control efficiency.** "Control efficiency" has the meaning given in Minn. R. ch. 7011.0060 subp. 3a.

Subp. 11e. **Mercury.** "Mercury" means all inorganic and organic airborne compounds of mercury, including elemental mercury, expressed as elemental mercury.

Subp. 11f. **Mercury emission source.** "Mercury emission source" means a stationary source with actual mercury emissions of 3.00 pounds per year or more, after controls. Mercury emission sources do not include fugitive emissions. If the actual mercury emissions are below the threshold in this subpart for three years, then the stationary source is no longer considered a mercury emission source. Records of the determination must be retained on site for a period of five years from the date the determination was made. The owners or operators must make these records available for inspection and submit them, within specified timelines, on the request of the Commissioner. If a physical or operational change causes the stationary source to again become a mercury emission source, the owners or operators must resume compliance with applicable requirements for mercury emission sources. Fugitive emissions has the meaning given in Minn. R. 7005.0100 subp. 11c. Stationary source has the meaning given in Minn. R. 7005.0100 subp. 42c.

CHAPTER 7007, PERMITS AND OFFSETS

7007.0502 **MERCURY EMISSIONS REDUCTIONS**

Subpart 1. **Scope.** The owners or operators of a mercury emission source operating as of [EFFECTIVE DATE OF RULE] must comply with this part.

Subp. 2. **Statewide Mercury Air Emission Reduction Target.** The statewide mercury air emission target is 789 pounds, to be achieved by 2025, as described in the Total Maximum Daily Load study and approved by US EPA in March, 2007.

Subp. 3. **Mercury Emissions Reduction Plan (Plan) Exemption.** The owners or operators of a mercury emission source are not required to submit a Plan if:

A. a mercury emission source has a mercury emission limit or an enforceable standard of performance other than 40 CFR Part 63 Subpart YYYYY, operating permit, schedule of compliance, or other enforceable agreement to reduce mercury;
B. a mercury emission source is subject to Minn. Stat. 216B.682 to 216B.688;
C. a mercury emission source is a stationary source that has only combustion devices and whose combustion emissions are from only natural gas, LPG, propane or oil fuels;
D. a mercury emission source subject to a performance standard for mercury in Minn. R. ch. 7011.0561, 7011.1215, 7011.1350 – 7011.1355, 7011.2000 – 7011.2017 and 7011.4000 – 4050; or 7011.7050, or 7011.7055.
E. a mercury emission source is:
    1. subject to the Minnesota Industrial Stormwater Multi-Sector General permit;
    2. required to prepare a Mercury Management Plan; and
    3. complying with the provisions of the Mercury Management Plan.

Subp. 4. **Mercury Emission Reduction Plan and Submittal Deadlines.**

A. The owners or operators of a mercury emission source that does not meet an exception under subpart 3 must prepare and submit a Plan to the Commissioner for approval no later than June 30, 2015, or as provided under item D.
B. The owners or operators of a mercury emission source that is a ferrous mining or processing facility must submit a Plan by June 30, 2016.

Subp. 5. **Mercury Emissions Reduction Plan Elements and Format.** Unless exempt under subpart 3, the owners or operators of a mercury emission source must submit a Plan that complies with items A to C.

A. The Plan must be submitted in a format specified by the Commissioner and must contain the elements listed in subitems 1 to 5.
    (1) A description of the specific control equipment, processes, materials or work practices that will be employed to achieve the applicable control efficiencies, reductions or allowable emissions and work practices listed in subpart 6 or submit an alternative proposal according to subpart 5, item C. If the emission unit and control equipment are listed in an existing permit, provide the unit or stack/vent identification.
    (2) A proposed monitoring and record-keeping system for the proposed control equipment, processes, materials or work practices or citation to an applicable requirement for monitoring and record-keeping consistent with Minn. R. 7017. If the owners or operators propose work practices to implement the Plan, then the owners or operators will keep records as required in subpart 6.
    (3) A description of the operational parameters necessary to optimize mercury control efficiency for air pollution control equipment emission units, or emission facilities. Quantify the degree to which those operational parameters will affect mercury emissions or justify why quantification is not possible.

(4) The mercury control efficiency or the emission rate that each emission unit or emission facility will achieve once the reduction plan for that emission unit or emission facility is fully implemented. Control efficiency has the meaning given in 7011.0060 subp. 3a.

(5) Final compliance with the mercury reductions in the Plan must be achieved no later than Dec. 31, 2025.

B. The owners or operators of a mercury emission source must modify the schedule for achieving Plan elements by submitting a written request to the Commissioner at least 90 days prior to the date for which the first change is requested. If approved, the owners or operators shall receive written confirmation of the revised schedule.

C. If the mercury control and work practice requirements listed in subpart 6 are not achievable, the owners or operators must make a written request to the Commissioner for an exemption from the requirements. This request must be submitted at least 365 days prior to the submittal date in subpart 4. The request must explain why compliance with the requirement(s) is not achievable because of engineering constraints, availability of equipment, or other justifiable technical reasons. The owners or operators must submit an alternative plan to reduce mercury emissions by the date listed in subpart 4. The alternative plan will include the plan elements in subpart 5, item A, substituting the owners' or operators' proposed reduction for subpart 6 requirements. The Commissioner will notify the owners or operators in writing of its approval or disapproval of the request. Should this be public noticed?

Subp. 6. **Mercury Control and Work Practices.** The owners or operators of a mercury emission source in a source category listed in this subpart and required to submit a Plan under subpart 4 shall include in the Plan the minimum mercury control requirement for source categories listed in this subpart.

A. Ferrous Mining or Processing.

1. The contents of the plan for the indurating furnace of a taconite iron ore processing facility or the rotary hearth furnace of a direct iron reduction facility shall demonstrate that by January 1, 2025 mercury emissions are 28% of the number of pounds mercury emitted in 2010. The emissions in 2010 are as determined by the Commissioner. If the facility was issued a construction permit but not operating in 2010, then the operating furnace shall not exceed 28% of the PTE of the permit authorizing construction.
2. The plan may accomplish reductions as:
    a. 28% of 2010 emissions for each furnace; or
    b. 28% of 2010 emissions across all furnaces at a single stationary source; or
    c. 28% of 2010 emissions across all furnaces at multiple stationary sources when all stationary sources are under common control or ownership.
3. The owners or operators must evaluate the use of a continuous emission monitoring system for mercury, especially if the proposed control method is injection of a sorbent to remove mercury.

B. Lime Kilns. A minimum control requirement of 70% applies by January 1, 2018, calculated as the total mercury captured as a percentage of mercury in the feedstock and fuel.

C. Iron and steel melters.

1. Unless a federal standard establishes an enforceable mercury emission limit [delete?] the plan for an iron or steel melter shall demonstrate that by January 1, 2018 mercury emissions from the iron or steel melter does not exceed 77 x 10^{-6} pounds of mercury per ton (35 milligrams per ton) of iron or steel produced.
2. "Iron or steel melter" means a stationary source where shredded motor vehicle scrap or other undifferentiated shredded ferrous scrap are melted to produce steel or iron products.

3. "Motor vehicle scrap" means vehicle or automobile bodies, including automobile body hulks, which have been processed through a shredder. Motor vehicle scrap does not include miscellaneous vehicle parts, such as wheels, bumpers or other components that do not contain mercury switches.
4. "Undifferentiated shredded ferrous scrap" means white goods or industrial equipment which have been processed through a shredder and the component parts were not separated and sorted prior to shredding.

D. **Mercury Emission Sources not otherwise identified**. For mercury emission sources that are not otherwise identified in this subpart or in Minn. Rules Chapter 7011, a Plan must be submitted to the commissioner within 180 days from the time that the owners or operators determine that the stationary source is a mercury emission source. The Plan shall show that air pollution control equipment, work practices, or the use of alternative fuels or raw materials has been optimized such that the source is emitting the lowest achievable mercury emissions rate.

Subp. 7. **Compliance with Plans**

A. The Commissioner will review and approve Plans.
B. The Commissioner can modify the Plan if the Agency determines that the proposed Plan would not achieve reasonable progress by the mercury emission source toward the statewide mercury air emission reduction target.
C. The plan may be amended by the owners or operators with the Commissioner's approval.
D. The owners or operators of the mercury emission source will operate in compliance at all times with the approved Plan.
E. If the Commissioner determines the owners or operators are out of compliance with the Plan, then the owners or operators may be required to amend the Plan.
F. The Commissioner will propose a schedule of compliance and mercury reduction within 180 days of the submittal date if the owners or operators of a mercury emission source fail to submit a Plan by the date specified in subp. 4.,

Chapter 7011, STANDARDS FOR STATIONARY SOURCES

7011.0561 Control of mercury from electric generating units.

The owners or operators of a coal-fired electric generating unit shall comply with the conditions of this part.

Subp. 1. **Definitions**

A. **Coal-fired electric generating unit.** "Coal-fired electric generating unit" or "coal-fired EGU" means an electric generating unit that burns coal either exclusively or with any fuels in any amount.
B. **Electric generating unit.** "Electric generating unit" or "EGU" means a fossil-fuel combustion unit more than 25 megawatt (MW) electric that serves a generator that produces electricity for sale. A fossil-fuel fired unit that cogenerates steam and electricity and supplies more than one-third of its potential electric output capacity to any utility power distribution system for sale is considered an electric generating unit.
C. **Grace period.** "Grace period" means a specified number of hours after the deadline of a required quality assurance test has passed, in which the test may be performed without the loss of data.
D. **Minimally emitting unit.** "Minimally emitting unit" means a coal-fired electric generating unit for which the owners or operators have demonstrated is emitting 5 pounds of mercury or less in any calendar year.

E. **Operating hour. "**Operating hour" means a clock hour in which a unit combusts any fuel or gases flow through a monitored stack or duct either for part of or for the entire hour.

F. **Operating quarter. "**Operating quarter" means a calendar quarter in which there are at least 168 operating hours.

Subp. 2. Coal-fired EGUs not subject to this part. The owners or operators of a coal-fired EGU is not subject to the requirements of part 7011.0561 if one of the conditions below applies.

A. The coal fired EGU is determined to be a minimally-emitting unit as defined in subpart 8.

B. The coal fired EGU did not combust coal for more than 10 percent of the average annual heat input during any 3 calendar years or for more than 15.0 percent of the annual heat input during any calendar year.

Subp. 3. Performance Standards for Mercury Emissions. Unless the Commissioner establishes an alternative mercury emissions reduction under the provisions of Minn. Stat. 216B.687, subd. 3, the owners or operators of coal-fired units that do not qualify for exemptions under subpart 2 shall control mercury emissions as described in this subpart.

A. By January 1, 201X, or within 180 days of determining the unit is no longer a minimally-emitting unit, owners or operators of a coal-fired EGU with a nameplate electricity generation capacity greater than 100 MW shall control mercury such that 90 percent of the mercury present in the fuel when combusted is captured and not emitted, or shall demonstrate that the unit emits no greater than 0.8 pounds per trillion British thermal units (lb/Tbtu) of mercury, whichever is least stringent.

B. By January 1, 2026, or within 180 days of determining the unit is no longer a minimally-emitting unit, owners or operators of a coal-fired EGU that is not a supplemental unit as defined in Minn. Stat. §§ 216B.682 to 216B.688, and with a nameplate capacity less than or equal to 100 MW shall control mercury such that 70 percent of the mercury in the fuel when combusted is captured and not emitted, or demonstrate that the unit emits no greater than 2.3 lb/Tbtu of mercury, whichever is least stringent.

C. By January 1, 2014, owners or operators of a coal-fired EGU that is a supplemental unit as defined in Minn. Stat. §§ 216B.682 to 216B.688, must control mercury such that 70 percent of the mercury in the fuel when combusted is captured and not emitted, or demonstrate that the unit emits no greater than 2.3 lb/Tbtu of mercury, whichever is least stringent.

Subp. 4. **Monitoring mercury emissions.** The owners or operators of a coal-fired EGU shall monitor mercury emissions as described in this subpart.

A. Coal-fired units with a generating capacity equal to or greater than 250 MW (net) shall continuously monitor mercury at the outlet of the last air pollution control device. A continuous monitor is either a Continuous Emissions Monitoring System (CEMS) for mercury or a sorbent trap monitoring system capable of monitoring mercury as described in this part.

(1) Prepare a monitoring plan for the monitoring system. If the system is a CEMS for mercury, prepare the plan to address the requirements of subpart 5. If the system is a sorbent trap system, prepare the plan to address the requirements of subpart 6.

(2) If applicable federal regulations establish requirements for installation and operation for continuous monitoring of the coal-fired EGU, the monitoring plan shall describe the compliance procedures for the monitor(s) according to the federal regulation. If there are no applicable federal regulations, the monitoring plan shall address the remaining requirements of this subpart for installing, calibrating and operating a continuous mercury monitor.

B. If a coal-fired unit with a generating capacity less than 250 MW does not use a CEMS or a sorbent trap monitoring system to monitor mercury, conduct performance testing for mercury according to the provisions of this item once every 12 months, and complete the test no more than 13 months after the previous test. Performance stack tests for mercury may be performed less often if the performance tests for

at least 3 consecutive years show that mercury emissions are at or below 50 percent of the applicable limit and if there are no changes in the operation of the EGU or air pollution control equipment that could increase emissions. In this case, performance testing may be conducted once every 3 years, but no longer than 37 months after the previous performance test.

(1) Performance testing shall be conducted using Code of Federal Regulations title 40 part 60 Appendix A-8, Method 30B. The initial performance test shall be conducted for 30 boiler operating days. Sorbent traps shall be used no longer than 10 days. Subsequent performance tests may be 10 days long.

(2) Determine compliance by calculating the average mercury concentration from all sorbent trap results.

(3) If emissions are determined to be greater than 50 percent of the applicable limit, annual testing shall be resumed until 3 consecutive years demonstrates that emissions are equal to or below 50 percent of the applicable limit.

(4) Conduct performance tests in accordance with Minn. R. part 7017.2001 to 7017.2060 unless modified by this subpart.

Subp. 5**. Monitoring provisions for CEMS that monitor mercury.** These monitoring provisions apply to the measurement of mercury from coal-fired unit using a CEMS for mercury. A CEMS for mercury means the total equipment required to measure the total vapor phase mercury concentration consisting of three major subsystems: sample acquisition, transport and conditioning, mercury converter and analyzer, and a data acquisition and handling system.

A. The monitoring plan for the CEMS to measure mercury shall include following:
   (1) A description of the CEMS span value along with justification for its selection.
   (2) Methods, procedures, equations, and performance specifications (both main and alternate) to be used to conduct a certification test of the CEMS for mercury. The Certification shall include a 7 day Calibration Error Test, a Linearity Check, a Three Level System Integrity Check, a Cycle Time Test, and a Relative Accuracy Test Audit as described in 40 CFR Part 60, Appendix A.
   (3) Methods, procedures, equations and performance specifications to be used for ongoing Daily Calibration Error Test, System Integrity Check, Linearity Check or Three Level System Integrity Check, and a Relative Accuracy Test Audit tests. Calculate relative accuracy as described in section 12 of Performance Specification 2 or 6 in appendix B to 40 CFR Part 60
   (4) A description of calculations used to convert mercury concentration values to the appropriate units of the emission standard.

B. Operate the CEMS in compliance with the requirements of Minn. R. 7017.0100, 7017.1002, 7017.1030, 7017.1080 to 7017.1130, 7017.1150, and 7017.1180.

C. Conduct the routine quality assurance and control tests on a frequency as follows:
   (1) Calibration error test shall be conducted daily using either mid- or high-level gas. The calibrations are not required when the unit is not in operation.
   (2) Single level system integrity checks shall be conducted weekly meaning once every 168 operating hours for systems with mercury converters. This test is not required if daily calibrations are done with National Institute of Standards and Technology-traceable source of oxidized mercury.
   (3) Linearity checks or 3-level system integrity checks shall be conducted quarterly in each QA operating quarter and no less than once every 4 calendar quarters.
   (4) Relative Accuracy Test Audit shall be required annually meaning once every 4 quality-assured operating quarters. This deadline may be extended for non quality assured operating quarters up to a maximum of 8 quarters from the quarter of the previous test.
   (5) A 720 hour grace period will be allowed for RATAs.

D. Calibration gas mercury concentrations used to conduct quality assurance tests on CEMS shall have the following concentrations:

(1) Zero-level with a mercury concentration below the detectable limit of the analyzer
(2) Low-level with a mercury concentration of 20 to 30 percent the span value of the analyzer.
(3) Mid-level with a mercury concentration of 50 to 60 percent the span value of the analyzer.
(4) High-level with a mercury concentration of 80 to 100 percent the span value of the analyzer.
(5) Alternative concentrations may be used if approved by the commissioner.

E. Measurement or adjustment of CEMS mercury data for bias is not required.
F. Certify, operate, maintain and quality-assure CEMS used to convert measured hourly mercury concentrations to applicable emission standards according to the applicable provisions of 40 CFR Part 75.
G. Reduce the hourly averages data from the CEMS for mercury in accordance with 40 CFR Part 60.13(h)(2).
H. For any operating hour in which valid data are not obtained, use procedures from 40 CFR Part 75, Subp D to substitute data.
I. Convert hourly emissions concentrations to 30 boiler operating day rolling average [lb/Tbtu] according to appropriate emission rate equations of 40 CFR Part 60 App. A Method 19.
J. Using fuel sampling data generated by the procedures in subpart 7, demonstrate that the output from item G. is no greater than 10 percent of the input from fuel OR demonstrate that emissions in item H. are no greater than Subp. 3
K. The first 30 days after the compliance deadline in Subpart 3 will be used to determine compliance with the mercury emissions concentration limit.

Subp. 6. **Monitoring provisions for a sorbent trap monitoring system.** Owners or operators of a coal-fired EGU using a sorbent trap monitoring system must follow these monitoring provisions for the measurement of mercury. A sorbent trap monitoring system means the equipment necessary to monitor mercury emissions continuously by using paired sorbent traps containing iodated charcoal or other sorbent medium. The system consists of sample acquisition, transport, conditioning, sorbent traps, and an automated data acquisition and handling system. The system samples the stack gas at a constant proportional rate relative to the stack gas volumetric flow rate. The sampling is a batch process. The average mercury concentration in the stack gas for the sampling period is determined, in units of micrograms per dry standard cubic meter, (ug/dscm), based on the sample volume measured by the gas flow meter and the mass of mercury collected in the sorbent traps. The use of a sorbent trap monitor also requires the installation and certification of a stack gas flow monitor to maintain the ratio of stack gas flow rate to sample flow rate.

A. The monitoring plan for the sorbent trap monitoring system shall include the following:
(1) Methods, procedures, equations, and performance specifications (both main and alternate) to be used to conduct a certification test of the sorbent trap monitoring system.
(2) Methods, procedures, equations, and performance specifications (both main and alternate) to be used for ongoing Relative Accuracy Test Audit tests.
(3) Rationale for the minimum acceptable data collection period for the size of the sorbent trap selected. Each pair of sorbent traps may be used for up to 10 days.
(4) Procedures used to monitor system integrity and data quality
(5) A description of calculations used to convert Mercury concentration values to the appropriate units of the emission standard.
(6) Procedures for inscribing or permanently marking a unique identification number on each sorbent trap for tracking purposes. A record system must be developed to track the ID of the monitoring system along with dates and hours of each collection period.

B. Operate the continuous monitor in compliance with the requirements of Minn. R. 7017.0100, 7017.1002, 7017.1030, 7017.1080 to 7017.1130, 7017.1150, and 7017.1180.
C. Conduct the routine quality assurance and control tests on a frequency as follows:

(1) Relative Accuracy Test Audit shall be required annually meaning once every 4 quality-assured operating quarters. This deadline may be extended for non quality assured operating quarters up to a maximum of 8 quarters from the quarter of the previous test.

(2) A 720 hour grace period will be allowed for RATAs.

D. Measurement or adjustment of mercury continuous monitor data for bias is not required.

E. Monitoring systems that are used to measure stack gas volumetric flow rate, diluent gas concentration, or stack gas moisture content, either for routine operation of a sorbent trap monitoring system or to convert mercury concentration data to units of the applicable emission limit, must be certified in accordance with the applicable provisions of 40 CFR Part 75.

F. Determine the mercury concentration for each data collection period and assign this concentration value to each operating hour in the data collection period.

G. For any operating hour in which valid data are not obtained, use procedures from 40 CFR Part 75, Subp D to substitute data.

H. Convert hourly emissions concentrations to 30 boiler operating day rolling average [lb/Tbtu] according to appropriate emission rate equations of 40 CFR Part 60 App. A Method 19.

I. Using fuel sampling data generated by the procedures in subpart 7, demonstrate that the output from item G. is no greater than 10 percent of the input from fuel OR demonstrate that emissions in item H. are no greater than Subp. 3.

J. The first 30 days after the compliance deadline in Subpart 3 will be the first period used to determine compliance with the mercury emissions concentration limit.

Subp. 7 **Procedures for determining the mercury content of fuel.** When the mercury content of fuel is needed to determine total mercury emission reductions, owners or operators of a coal-fired EGU must use the fuel sampling and measuring fuel content procedures of this subpart. The mercury content of fuel used for startup, unit shutdown or transient flame stability does not need to be measured.

A. Identify all fuels burned at the EGU.

B. Collect samples of each fuel using ATSM D2234/D2234M for 30 days.

C. Prepare composited sample for each fuel type using ASTM D2013/D2913M

D. Determine heat content of fuel using ASTM D5865

E. Determine moisture content of fuel using ASTM D3173

F. Measure mercury in fuel sample using ASTM D6722-01 or SW-846-7471 (for solid samples) and report in terms of lb/ton of fuel burned.

Subp. 8. **Demonstrating an EGU is a minimally-emitting unit.** To be classified as a minimally-emitting unit, by January 1, 2014 the owners or operators of a coal-fired EGU shall conduct a 28 to 30 operating day performance test, using Code of Federal Regulations title 40 part 60 Appendix A-8, Method 30B to determine mercury concentration with the procedures of this subpart.

A. Identify all fuels used at the unit. Fuels which result in the highest likely mercury content shall be burned during the performance test.

B. Locate the Method 30B sampling probe tip at a point within the 10 percent centroidal area of the duct at a location that meets Method 1 in 40 CFR Part 60 appendix A–8 and conduct at least three nominally equal length test runs over the 28 to 30 day test period. Collect diluents gas data over the corresponding time period, and if preferred for calculation of pounds per year of Mercury, stack flow rate data using Method 2 in 40 CFR Part 60 appendix A–1 or a certified flow rate monitor and moisture data using Method 4 in 40 CFR Part 60 appendix A–1 or a certified moisture monitor. You may not use a pair of sorbent traps for more than 10 days when sampling the stack gas.

C. Calculate the average mercury concentration, in ug/m3, for the 28 to 30 day performance test, as the arithmetic average of all sorbent trap results. Calculate the average CO2 or O2 concentration for the test period. Use the average mercury concentration and diluents gas values to express the performance test

results in units of lb of Mercury/Tbtu and pounds of Mercury per year, using the expected fuel input over a year period. Alternatively, calculate pounds of mercury per year using the average mercury concentration, average stack gas flow rate, average stack gas moisture, and maximum operating hours per year.

D. Record parametric data for air pollution control devices in place during the performance test.
E. Operate air pollution control devices to continue removing mercury from the flue gases as described in Subp. 9.
F. Repeat the performance test once every five years to demonstrate that the EGU remains a minimally-emitting unit.

Subp. 9. **Operating Requirements for Mercury Controls.** For each of the air pollution control devices employed at the time that a performance test is conducted and compliance is demonstrated, owners or operators of a coal-fired EGU must maintain the listed operating limit in items A to C.

A. Fabric filter control. Install and operate a bag leak detection system and operate the fabric filter such that the bag leak detection system does not initiate alarm mode more than 5 percent of the operating time during each 6-month period.
B. Dry scrubber, dry sorbent injection or carbon injection. Maintain the sorbent or carbon injection rate at or above the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emissions limit.
C. Operating load. For coal-fired EGUs that rely on performance testing, maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance test.

Subpart 10. **Incorporation by reference.** For purposes of complying with this part, the documents listed below are incorporated by reference, as amended. These documents are available through the Minitex interlibrary loan system. They are subject to frequent change.

(1) Annual Book of American standards and testing methods? (ASTM) method
(2)

Minn. R. 7011.0563 INCORPORATION OF EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM COAL AND OIL-FIRED ELECTRIC UTILITY STEAM GENERATORS

Code of Federal Regulations, title 40, part 63, subpart UUUUU, as amended, entitled "National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units" is incorporated by reference, except that the authorities identified in section 63.10041(b) are not delegated to the commissioner and are retained by the administrator.

7011.1201 DEFINITIONS

Subp. 12. [See Repealer] ~~**Class D waste combustor.** "Class D waste combustor" means that the design capacity of a waste combustor unit is 3.0 x 10^6 Btu/hr or more, combusts waste other than mixed municipal solid waste or RDF, and was operating on or before December 20, 1989.~~

Subp. 13. **Class I waste combustor.** "Class I waste combustor" means that the design capacity for a municipal waste combustor unit is 93.75 x 10^6 Btu/hr or more, and that construction of the unit is commenced after September 20, 1994, or modification or reconstruction is commenced after June 19, 1996.

Subp. 14. **Class II waste combustor.** "Class II waste combustor" means that the design capacity for a municipal waste combustor unit is 15 x 10^6 Btu/hr or more and less than 93.75 x 10^6 Btu/hr, and that construction of the unit is commenced after September 20, 1994, or modification or reconstruction is commenced after June 19, 1996.

Subp. 15. **Class III waste combustor.** "Class III waste combustor" means that the design capacity for a waste combustor unit is 3.0 x 10^6 Btu/hr or more and less than 15 x 10^6 Btu/hr, and the waste combustor is issued a permit for construction after December 20, 1989.

Subp. 16. **Class IV waste combustor.** "Class IV waste combustor" means that the design capacity for a waste combustor unit is less than 3.0 x 10^6 Btu/hr.

Subp. 16a. **Commercial or industrial solid waste incinerator.** A "commercial or industrial solid waste incinerator" means any distinct operating unit at a commercial or industrial solid waste facility that combust, or has combusted in the preceding 6 months, any solid waste as that term is defined in 40 CFR Part 241.

7011.1215 APPLICABILITY OF STANDARDS OF PERFORMANCE FOR WASTE COMBUSTORS.

Subpart 1. **Waste combustors.** A person who constructs, modifies, reconstructs, or operates a waste combustor shall comply with parts 7011.1201 to 7011.1290, except as provided in subparts 2, 2a, ~~and~~ 3 and 3a.

Subp. 2. **Cofired facilities.** A person who constructs, modifies, reconstructs, or operates a cofired unit is not a waste combustor, and shall comply with the applicable requirements of parts ~~7011.0500 to 7011.0551 or 7011.0600 to 7011.0625.~~ 7011.1360 to 7011.1370.

Subp. 2a**. NO CHANGE**

Subp. 2b. Units **combusting waste contaminated with used oil.** An owner of a solid-fuel-fired indirect or direct heating source burning fossil fuel with only wastes contaminated with used oil generated by the owner is not subject to parts 7011.1201 to 7011.1290.

...

Subp. 4. **Standards.** The standards of parts 7011.1227, 7011.1228, 7011.1229, 7011.1230, ~~7011.1231,~~ 7011.1233, 7011.1240, subpart 2, and 7011.1272, subpart 2, apply at all times when waste is being continuously burned, except during periods of start-up, shutdown, or malfunction, provided that the duration of start-up, shutdown, or malfunction does not exceed three hours. Fugitive emissions standards applicable to ash conveying systems do not apply during maintenance and repair of ash conveying systems. "Malfunction" means any sudden and unavoidable failure of air pollution control equipment or process equipment or of a process to operate in a normal or usual manner. Failures that are caused entirely or in part by poor maintenance, careless operation, or any other preventable upset condition or preventable equipment breakdown are not considered malfunctions.

The start-up period commences when the waste combustor begins the continuous burning of solid waste and does not include any warm-up period when the waste combustor is combusting fossil fuel or other solid fuel. Continuous burning is the continuous, semiMcontinuous, or batch feeding of solid waste for purposes of waste disposal, energy production, or providing heat to the combustion system in preparation for waste disposal or energy production. The use of solid waste solely to provide thermal protection of the grate or hearth during

the start-up period when municipal solid waste is not being fed to the grate is not considered to be continuous burning.

Subp. 5 NO CHANGE

~~Subp. 6. **Transition for Class D, III, or IV waste combustors.** Notwithstanding subpart 1, Class D, III, or IV waste combustors installed and operable on June 20, 1994, shall comply with parts 7011.1201 to 7011.1285 by January 30, 1996. Notwithstanding subpart 1, Class IV waste combustors operating under an air emissions permit issued between December 1, 1992, and June 20, 1994, shall comply with parts 7011.1201 to 7011.1285 upon expiration of that permit.~~

7011.1225 STANDARDS OF PERFORMANCE FOR WASTE COMBUSTORS.

Subpart 1. **Class A or C waste combustor.**
A. No owner or operator of a Class A or C waste combustor shall cause to be emitted into the atmosphere from each waste combustor unit gases in excess of the applicable standards of performance shown in parts 7011.1227 and 7011.1228. Emissions, except opacity, shall be calculated under standard conditions corrected to seven percent oxygen on a dry volume basis. An owner or operator of a mixed municipal solid waste or RDF waste combustor may determine compliance with the emission limitations using carbon dioxide measurements corrected to an equivalent of seven percent oxygen.
B. No owner or operator of a Class A or C waste combustor shall cause to be emitted into the atmosphere visible emissions of combustion ash from an ash conveying system, or buildings or enclosures of ash conveying systems, including conveyor transfer points, in excess of five percent of the observation period (i.e. 9 minutes per three-hour period), as determined by Code of Federal Regulations, title 40, part 60, Appendix A, Method 22, as amended. This limit does not apply to visible emissions discharged inside buildings or enclosures of ash conveying systems.

Subp. 2. **Class I or II waste combustors.** No owner or operator of a Class I or II waste combustor shall cause to be emitted into the atmosphere from each waste combustor unit gases in excess of the standards of performance shown in part 7011.1230.

Subp. 3. **Class III waste combustors.** No owner or operator of a Class III waste combustor shall cause to be emitted into the atmosphere from each waste combustor unit gases that contain particulate matter, PCDD/PCDF, mercury, carbon monoxide, or opacity in excess of the standards of performance in part 7011.1231. Emissions shall be calculated under standard conditions, corrected to seven percent oxygen on a dry volume basis. An owner or operator may determine compliance with the emission limitations using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between carbon dioxide and oxygen shall be established at each compliance test.

~~Subp. 4. **Class D waste combustors.** Except as provided in this subpart, no owner or operator of a Class D waste combustor shall cause to be emitted into the atmosphere from each waste combustor unit gases that contain particulate matter, PCDD/PCDF, carbon monoxide, or opacity in excess of the standards of performance in part 7011.1231. Emissions shall be calculated under standard conditions, corrected to seven percent oxygen on a dry volume basis. An owner or operator may determine compliance with the emission limitations using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between carbon dioxide and oxygen shall be established at each compliance test.
A Class D waste combustor that was burning more than 30 percent by weight of RDF on January 1, 1991, shall comply with the applicable standards of performance in parts 7011.0500 to 7011.0551 or 7011.0600 to 7011.0625, for equipment burning solid waste.~~

Subp. 5. **Class IV waste combustors.** No owner or operator of a Class IV waste combustor shall cause to be emitted into the atmosphere from each waste combustor unit gases that contain particulate matter, carbon monoxide, or opacity in excess of those concentrations in part 7011.1233. Emissions shall be calculated under standard conditions, corrected to seven percent oxygen on a dry volume basis. An owner or operator may determine compliance with the emission limitations using carbon dioxide measurements corrected to an equivalent of seven percent oxygen. The relationship between carbon dioxide and oxygen shall be established at each compliance test.

7011.1300 DEFINITIONS.

Subpart 1. **Scope.**

As used in parts 7011.1300 to 7011.1325, the following words shall have the meanings defined herein.

Subp. 2. **Burning capacity.**

"Burning capacity" means the manufacturer's or designer's maximum rate or such other rate that is considered good engineering practice and accepted by the commissioner.

Subp. 3. **Sewage sludge incinerator.**

"Sewage sludge incinerator" means any furnace or other device used in the process of burning sludge produced by a sewage treatment facility.

7011.1350 INCORPORATION OF NEW SOURCE PERFORMANCE STANDARD FOR SEWAGE SLUDGE INCINERATORS BY REFERENCE

The following New Source Performance Standards are incorporated by reference:

A. Code of Federal Regulations, title 40, part 60, subpart O, as amended, entitled "Standards of Performance for Sewage Treatment Plants," is incorporated by reference, except that decisions made by the administrator under Code of Federal Regulations, title 40, section 60.153(e), are not delegated to the commissioner and must be made by the administrator.

B. Code of Federal Regulations, title 40, part 60, subpart LLLL, as amended, entitled "Standards of Performance for New Sewage Sludge Incinerators" is incorporated by reference, except that decisions made by the administrator under Code of Federal Regulations, title 40, section 60.4785 (c) are not delegated to the commissioner and must be made by the administrator.

7011.1355 STANDARDS OF PERFORMANCE FOR EXISTING SEWAGE SLUDGE COMBUSTION FACILITIES—COMPLIANCE WITH CLEAN AIR ACT SECTION 129 STANDARDS

Subp. 1. Applicability. Except as provided in items A. to C., the owners or operators of each sewage sludge incineration unit as defined in 40 CFR 60.5250 for which construction was commenced on or before October 14, 2010, must comply with this part.

A. Combustion units that incinerate sewage sludge and are not located at a wastewater treatment facility designed to treat domestic sewage sludge are exempt from this rule. The owners or operators of the combustion unit must notify U.S. EPA and the commissioner of an exemption claim under this subsection.

B. If the owners or operators of a sewage sludge incineration unit makes changes that meet the definition of modification incorporated in Subpart 2 of this part after September 21, 2011:

(1) the sewage sludge incineration unit becomes subject to 40 CFR 60, Subpart LLLL; and

(2) this part no longer applies to that sewage sludge incineration unit.

C. Physical or operational changes made to a sewage sludge incineration unit for which construction commenced on or before September 21, 2011, primarily to comply with this rule:

(1) are not considered modifications or reconstructions; and

(2) do not result in a sewage sludge incineration unit becoming subject to 40 CFR 60, Subpart LLLL.

Subp. 2. **Incorporation of federal performance standards for existing sewage sludge incinerators.** For the purposes of this subpart, the term Administrator means the commissioner. The requirements from the Code of Federal Regulation, title 40, part 60, Subpart MMMM, Emission Guidelines and Compliance Times for Existing Sewage Sludge Incineration Units are incorporated by reference, as amended:

A. Increments of progress: 40 CFR 60.5085 to 40 CFR 60.5125. The deadlines for each increment of progress is as follows:
   1) owners or operators must submit a final control plan to the commissioner by [INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN STATE REGISTER];
   2) owners or operators of an affected unit must demonstrate compliance with the emission guidelines adopted herein by March 21, 2016.

B. Operator Training and Qualification, 40 CFR 60.5130 to 40 CFR 60.5160;

C. 40 CFR 60.5165 to 40 CFR 60.5181, Emission Limits, Emission Standards, and Operating Limits and Requirements;

D. 40 CFR 60.5185 to 40 CFR 60.5200, Initial Compliance Requirement;

E. 40 CFR 60.5205 to 40 CFR 60.5215, Continuous Compliance Requirements;

F. 40 CFR 60.5220 to 40 CFR 60.5225, Performance Testing, Monitoring, and Calibration Requirements;

G. 40 CFR 60.5230 to 40 CFR 60.5235, Recordkeeping and Reporting;

H. 40 CFR 60.5240 to 40 CFR 60.5245, Title V Operating Permits;
   1) For sewage sludge incinerators that do not hold Title V operating permits, submit an application for a title V permit by [INSERT DATE ONE YEAR AFTER DATE OF PUBLICATION IN STATE REGISTER];

I. 40 CFR 60.5250 Definitions;

J. 40 CFR 60, Subpart MMMM, Tables 1 though 6.

Subp. 3. **Mercury emission limitations for sewage sludge incinerators not subject to federal sewage sludge incinerator regulations.** Owners or operators of sewage sludge incinerators that are not subject to 40 CFR Part 60 Subp. LLLL nor 40 CFR Part 60 subp. MMMM because the incinerator is not a fluidized bed incinerator nor a multihearth incinerator shall comply with the mercury emission limits in Minn. R. parts 7011.1360 to 7011.1370.

COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS

7011.1360 EXISTING COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS COMPLIANCE REQUIREMENTS

Subp. 1. **Existing commercial and industrial solid waste incineration units.** The owners or operators of a commercial and industrial solid waste incineration unit that commences construction on or before June 4, 2010

must comply with the conditions contained in this part and part 7011.1365. These units are not commercial and industrial solid waste incineration units:

A. Pathological waste units

B. Units subject to 40 CFR Part 60 Subpart Ea, Eb, Cb, AAAA, BBBB, standards of performance for existing or new municipal waste combustors (or federal plan).

C. Units subject to 40 CFR part 60 Ec or Ca (or federal plan).

D. Small power production units that meet each of the following criteria:

(1) The unit qualifies as a small power-production facility under section 3(17)(C) of the Federal Power Act (16 U.S.C. 796(17)(C)).

(2) The unit burns homogeneous waste (not including refuse-derived fuel) to produce electricity.

(3) The commissioner approves a determination that the qualifying cogeneration facility is combusting homogeneous waste as that term is defined in 40 CFR 60. 2875. The request for a determination must include sufficient information to document that the unit meets the criteria of the definition of a small power production facility and that the waste material the unit is proposed to burn is homogeneous.

E. Cogeneration facility units that meet each of the following criteria:

(1) The unit qualifies as a cogeneration facility under section 3(18)(B) of the Federal Power Act (16 U.S.C. 796(18)(B)).

(2) The unit burns homogeneous waste (not including refuse derived fuel) to produce electricity and steam or other forms of energy used for industrial solid waste, commercial, heating or cooling purposed.

(3) The commissioner approves a determination that the qualifying cogeneration facility is combusting homogeneous waste as that term is defined in 40 CFR 60. 2875. The request for a determination must include sufficient information to document that the unit meets the criteria of the definition of a cogeneration facility and that the waste material the unit is proposed to burn is homogeneous.

F. Units that are required to get a permit under section 3005 of the Solid Waste Disposal Act.

G. Units that combust waste for the primary purpose of recovery metals, such as primary and secondary smelters.

H. Air curtain incinerators, provided that the incinerator burn only 100 percent wood waste, 100 percent clean lumber, or 100 percent mixture of clean lumber, wood waste and/or yard waste.

Subp. 2. **Compliance Deadline.** The owners or operators of a commercial and industrial solid waste incinerator shall demonstrate compliance with the requirements of part 7011.1365 no later than March 16, 2016 or three years after EPA approves a 111(d) plan incorporating this rule, whichever is earlier. Commercial and industrial solid waste incinerators operating on [THE EFFECTIVE DATE OF THIS RULE] shall submit to the Commissioner a control plan by [180 DAYS AFTER THE EFFECTIVE DATE OF THIS RULE].

Subp. 3. **Modifications.** If the owners or operators of a commercial and industrial solid waste incineration unit makes changes that meet the definition of modification incorporated under subpart 2 of this rule after September 21, 2011:

A. the commercial and industrial solid waste incineration unit becomes subject to Minn. R. part 7011.1360 and

B. this rule no longer applies to that commercial and industrial solid waste incineration unit.

Subp. 4. **Physical or operational changes.** Physical or operational changes made by owners or operators to a commercial and industrial solid waste incineration unit for which construction commenced on or before June 4, 2010, primarily to comply with this rule:

A. are not considered modifications or reconstructions; and

B. do not result in a commercial and industrial solid waste incineration unit becoming subject to Minn. R. part 7011.1370.

Subp. 5. **Exceedances of emission limits.** If accurate and valid data results of a performance test demonstrate an exceedance of an emissions standard described in part 7011.1370 or in the facility air emissions permit after normal start-up, the owners or operators of a commercial and industrial solid waste incinerator shall undertake the actions in items A to D.

A. The owners or operators shall immediately report the exceedance to the commissioner and shall comply with the applicable reporting provisions of part 7007.0800, subpart 6.

B. The owners or operators shall undertake appropriate steps to return the commercial and industrial solid waste incinerator to compliance, and shall demonstrate compliance within 60 days of the initial report of the exceedance.

C. If the Commissioner determines that compliance has not been achieved within 60 days of the initial report of exceedance, the commercial and industrial solid waste incinerator shall be shut down.

D. If shutdown was required under item C, the commercial and industrial solid waste incinerator may be restarted under the conditions specified by the commissioner. The owners or operators must notify the commissioner in writing of the date on which the owners or operators plan to start-up and to begin compliance testing. Notification shall be at least ten days in advance of the compliance test date.

E. Normal startup means the period of time between the initial start-up of a new, modified, retrofitted, or reconstructed emissions unit of a waste combustor, or emissions unit of a waste combustor that is modified, retrofitted, or reconstructed to meet the requirements of parts 7011.1360 to 7001.1370 and the lesser of 60 days after achieving the maximum production rate at which the emissions unit will operate or 180 days after initial start-up.

F. Accurate and valid data means data which provides the measurement of emissions of an air contaminant from the incinerator or operating parameters of a component of the incinerator. For continuously monitored emissions, data shall be considered accurate and valid immediately upon recording. For emissions for which a performance test is conducted, data shall be considered accurate and valid 14 days after the incinerator owners or operators receive the performance test report, unless the incinerator owners or operators notify the commissioner within the same 14 days that the owners or operators can show reason for rejecting the data.

7011.1365 INCORPORATION OF STANDARDS OF PERFORMANCE FOR EXISTING COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS BY REFERENCE

Code of Federal Regulations, title 40 , parts 60.2575 to 60.2875, as amended entitled "Standards of Performance for Commercial and Industrial Solid Waste Incineration Units" is incorporated by reference.

7011.1370 INCORPORATION OF NEW SOURCE PERFORMANCE STANDARD FOR NEW COMMERCIAL AND INDUSTRIAL SOLID WASTE INCINERATORS BY REFERENCE

Code of Federal Regulations, title 40, part 60, subpart CCCC, as amended, entitled "Standards of Performance for Commercial and Industrial Solid Waste Incineration Units" is incorporated by reference.

RECYCLING OF MERCURY AND MERCURY-CONTAINING PRODUCTS.

7011.4000. DEFINITIONS.

Subp. 1. **Scope.** As used in this part, unless the context indicates otherwise, the following words, phrases, or terms shall have the following meanings:
Subp. 2. **Lamp.** "Lamp" means any electric lighting device which to which mercury is intentionally added during the manufacturing process. The term lamp includes, but is not limited to, linear and compact fluorescent lamps, mercury vapor lamps, high-intensity discharge lamps such as high pressure sodium and metal halide lamps, ultraviolet (UV) lamps, black light lamps and neon lamps.
Subp. 3. **Mercury-containing.** "Mercury-containing" has the meaning given in Minn. Stat. § 116.92 Subd. 10.
Subp. 4. **Processing equipment.** "Processing equipment" means any equipment that is used in mercury recovery or mercury reclamation operations to separate, crush, consolidate, recover, retort, distill and recycle or to physically alter the state of spent mercury-containing lamps or products, or mercury-containing residuals as they are received.
Subp. 5. **Recycled or Recycling.** "Recycled" or "Recycling" means any process by which spent lamps, mercury-containing products or devices, or mercury-containing residual components such as glass, mercury, phosphor powder or metal are reused or returned to use in the form of products or raw materials.
Subp. 6. **Retorting.** "Retorting" means thermal processing that volatilizes mercury and subsequently condenses the volatilized mercury for recovery.
Subp. 7. **Volume reduction process**. "Volume reduction process" means an operation to receive and process spent mercury-containing lamps, products or devices in a manner such as crushing, grinding, compacting, or physically altering the state of the lamps, products or devices and that is used to reduce the size or volume of lamps or mercury-containing products or devices.

7011.4010. APPLICABILITY.

A. Owners or operators of a facility that recycles mercury and mercury-containing products that meet the definition of a mercury emission source under Minn. R. 7005.0100 subp. 11f must comply with the conditions of parts 7011.4010 to 7011.4050.
B. Owners or operators of a bulk collection facility for electronic waste and lamps in amounts over the thresholds in 7011.4020 Subp. 1 must comply with the conditions in Subp. 1, items A and B.

7011.4020. PERFORMANCE REQUIREMENTS.

Subp. 1. **Collection facilities**.
The owners or operators of a collection facility that aggregates lamps, mercury-containing products or devices prior to shipping those materials to a recycling facility must comply with items A and B. This subpart applies to collection facilities that aggregate more than 1,000 lamps that are not generated by the handler or more than 5,000 kilograms of mercury-containing products or devices. This subpart is not intended to address local lamp or electronic waste collection drop-off sites such as retail outlets, hardware stores or county household hazardous waste collection sites.

A. Material handling. Conduct all sorting, consolidation, and handling activities in a fully-enclosed area and in a manner that minimizes breakage of mercury-containing products.
B. Hazardous Waste Regulations. If applicable to the waste and the collection facility, the owners or operators must follow the appropriate hazardous waste regulations, i.e. the federal universal waste regulations as set forth in 40 CFR part 273 or Minn. R. ch. 7045.

Subp. 2. **Volume reduction and mercury recycling facilities**.
The owners or operators of a volume reduction, mercury recovery and mercury reclamation process must comply with items A and B:
A. Storage

(1) Enclosed storage. Store spent lamps and mercury-containing products or devices must be stored in a fully enclosed location. Outdoor storage of spent lamps and mercury-containing products or devices is prohibited.
(2) Crushed or broken lamps. If a recycling facility receives crushed or broken lamps, the crushed or broken lamps must either be processed immediately or stored in a sealed drum. The means by which the lamps are introduced to the processing equipment must minimize the amount of dust and mercury released from the system.
(3) Hazardous Waste Regulations. If applicable to the waste and the facility, the owner or operator must follow the appropriate hazardous waste regulations, i.e. the federal universal waste regulations as set forth in 40 CFR part 273 or Minn. R. ch. 7045.

B. Handling and processing
(1) Material handling. Conduct all sorting, consolidation, and handling activities in a manner that minimizes breakage of mercury-containing lamps, products or devices.
(2) Negative Pressure Requirement. Whenever processing mercury-containing lamps, products or devices, all volume reduction processes, separation of residuals and distillation/retort processes must be fully enclosed and kept under at least 10% negative pressure in relation to corridors or other non-processing areas.
(3) Air Pollution Control Equipment. The owner or operator must operate, monitor and maintain an air handling system with air pollution control equipment on each full enclosure or room in which processing occurs. Air pollution control equipment must be designed to control dust and mercury vapor from processing equipment prior to exhausting the air outside the building.
(4) Required controls are a particulate filter such as a baghouse or HEPA filter followed by at least one activated carbon adsorber arranged so that the process air passes through both air pollution control devices before being released outside the building. The owner or operator may propose equivalent technology to carbon filtration to the Commissioner that meets or exceeds the control requirements of subitem (5) for approval.
(5) Minimum required control efficiency. Control efficiency of the particulate control device must be consistent with Table A of Minn. R. 7011.0070, Listed Control Equipment and Control Equipment Efficiencies. Control efficiency of the carbon adsorber must be at least a 95% reduction in mercury.
(6) Processed materials and residuals. Store residual materials, powder and dust removed from particulate filters in an air-tight container such as a sealed drum. Distilled elemental mercury must be stored in an air-tight container.
(7) Drum top crushers. The use of drum top crushers is prohibited.
(8) Beneficial Reuse. The owners and operators must comply with Minn. R. ch. 7035 regarding beneficial reuse of solid wastes to reuse any residual materials.

7011.4030. COMPLIANCE DEMONSTRATION.

Subp. 1. Installation and operation of air pollution control equipment.
A. Owners and operators of lamp volume reduction, mercury recovery and mercury reclamation processes operating on [THE EFFECTIVE DATE OF THIS RULE] must install the air pollution control equipment required in part 7011.4020 within 365 days of [THE EFFECTIVE DATE OF THIS RULE] if such equipment is not already in place at the stationary source.
B. Owners or operators of new lamp volume reduction, mercury recovery and mercury reclamation processes must install the air pollution control equipment required in part 7011.4020 prior to the initial startup of processing operations.
C. Once installed, owners or operators must run the air pollution control equipment whenever volume reduction processes, separation of residuals and distillation /retort processes occur.
D. Owners or operators must monitor the performance of the air pollution control equipment for mercury as required in subitems (1) to (3).

(1) Install a measurement port in the stack or vent of the inlet and outlet of the carbon adsorber
(2) A [hand held (or fixed type?) of monitor] shall be used to measure the concentration of mercury in each stack or vent of the carbon adsorber
(3) The exhaust stream leaving the carbon adsorber must be monitored for mercury breakthrough at least once each day that processing occurs.
(4) Compare the inlet and outlet mercury concentrations of the carbon adsorber to estimate control efficiency within 30 days of replacing the carbon and at least once per year.
(5) something about detection limit of monitor?

Subp. 2. Operation and maintenance. Owners or operators shall comply with items A and B.
A. Particulate Control Devices.
Maintain particulate air pollution control equipment consistent with the procedures listed in Minn. R. 7011.0075, Listed Control Equipment General Requirements.
B. Carbon Adsorbers.
(1) Replace spent carbon with fresh carbon immediately when mercury breakthrough is measured.
(2) Document operating and maintenance procedures to demonstrate that mercury controls are being maintained according to the manufacturer's recommendation.
(3) Reduction efficiency of the activated carbon adsorber can be demonstrated with a performance certification from the manufacturer of the control equipment. If no such certification is available, a performance test to demonstrate compliance must be conducted. Follow the procedures in Minn. R. ch. 7017.

C. Performance Testing.
1. If requested by the Commissioner, a performance test must be conducted within 120 days of the request if the control equipment is in place on EFFECTIVE DATE OF THIS RULE.
2. If control equipment must be installed, then a performance test to demonstrate compliance must be conducted within 180 days of start up of the new control equipment.

7011.4040. RECORDKEEPING REQUIREMENTS.
Owners or operators of a source subject to this rule shall maintain records on site with the information in items A to D. The records shall be available for Agency inspection, for a period of at least five years from the date of collection:
A. Operating and maintenance procedures for mercury control equipment;
B. Breakthrough monitoring information for the carbon adsorber:
(1) The location of the measurement port;
(2) The date and time of measurement;
(3) The methodology used;
(4) The analytical results; and
(5) The amount of carbon replaced and the date the replacement was made.
C. All calibration and maintenance records of monitoring equipment; and
D. Particulate control equipment records consistent with the procedures listed in Minn. R. 7011.0080, Monitoring and Record Keeping For Listed Control Equipment.

7011.4050. EMISSION CALCULATIONS AND REPORTING.
A. Annual reporting. Owners or operators of a stationary source whose total facility mercury emissions meet the threshold in pounds per year of a mercury emission source as defined by part 7005.0100, subpart 11f, will report annually according to the requirements of Minn. R. ch. 7019.

(1) Mass Balance. If the owners or operators use a mass balance to calculate mercury air emissions, they must make a separate mass balance to calculate the mercury contained in each applicable process using the procedure in Minn. R. ch. 7019.3065, Mercury Material Balance.
(2) Performance Testing. If the owners or operators use a performance test to determine mercury air emissions, they must follow the testing procedures in Minn. R. ch. 7017.

B. Owners or operators of a source subject to this part shall maintain records on site and available for Agency inspection, for a period of at least five years from the date of the calculation or performance test.
C. Alternative methods. The owners or operators of the process units subject to this part may request that the Commissioner approve alternative methods for determining mercury emissions.

7011.7050 Industrial, Commercial, and Institutional Boilers and Process Heaters—Major Sources

Code of Federal Regulations, title 40, part 63, subpart DDDDD, as amended, entitled "**National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters**," is incorporated by reference, except that the authorities identified in section 63.313(d) are not delegated to the commissioner and are retained by the administrator.

7011.7055 Industrial, Commercial, and Institutional Boilers—Area Sources

Code of Federal Regulations, title 40, part 63, subpart JJJJJJ, as amended, entitled "**National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources**," is incorporated by reference, except that the authorities identified in section 63.11236(c) are not delegated to the commissioner and are retained by the administrator.

CHAPTER 7019, Emission Inventory Requirements

7019.3000 **EMISSION INVENTORY.**

Subpart 1 – NO CHANGE

Subpart 2 – NO CHANGE

Subp. 3. **Mercury Emission Sources.** Owners or operators of a mercury emission source as defined in part 7005.0100, subpart 11f, must submit an annual emission inventory report of the mercury emissions to the commissioner in a format specified by the commissioner. The report shall be submitted on or before April 1 of the year following the year being reported. Stationary sources with air emissions of mercury and that are not considered a mercury emission source will report every three years.

Subp. 4. **Possible Mercury Emission Sources**. If the Agency finds that a stationary source with mercury emissions has activity levels, emission factors or measured mercury concentrations detected outside the property boundary that indicate the possibility to exceed the threshold for a mercury emission source, the Commissioner may request that the owners or operators quantify the source's mercury emissions using the methods listed in Minn. R. 7019.3030, item A. The owners or operators must complete the quantification and submit a report to the Commissioner within 120 days of the Agency's request.

7019.3020 CALCULATION OF ACTUAL EMISSIONS FOR EMISSION INVENTORY.

F. All owners or operators of an emission reporting facility submitting an emission inventory based in whole, or in part, on a material balance calculation shall submit a sample material balance calculation with the emission inventory. Such facilities shall also maintain a record of the material safety data sheets or vendor certification of the VOC, mercury or sulfur content of the material for each material or fuel used and the material balance calculations for a period of five years after the date of submittal of the emission inventory.

7019.3050 PERFORMANCE TEST DATA.

A. If an emission reporting facility or mercury emission source as defined in Minn. R. 7005.0100 subpart 11f has collected representative emission data through the use of performance tests in compliance with the preconditions in items B and C, and if CEM data under part 7019.3040 is not available, the facility shall calculate its emissions based on performance tests. If the emission data is unrepresentative because fuel or material feed used under the test conditions is substantially different than the conditions under which the emissions unit is normally operated or because the emissions unit has been modified, the facility shall calculate its emissions based on the next highest available method. Emissions unit operating load variation from test load does not make the data unrepresentative. In the event that the facility has collected emission data through the use of performance tests and determines that the data is unrepresentative for any reason, the facility shall submit an explanation of why the data is unrepresentative with the emissions calculated using the next highest available method. The commissioner shall determine if the conditions of the performance test were representative based upon the operating data supplied by the facility for the year of the inventory.

B. – NO CHANGE

C. – NO CHANGE

D. If the most recently conducted performance test data is more than ten years older than the last date of the emission inventory period, then the emission factor derived from the performance test shall be used if it results in higher calculated emissions than any default emission factor allowed under part 7019.3060, 7019.3070, or 7019.3080, as applicable, unless an alternative factor is approved by the commissioner under part 7019.3100 (facility proposal) or unless continuous emission monitor data that satisfies the conditions of part 7019.3040 is available. The performance test data must be representative of operating conditions during the calendar year for which the emission inventory is being submitted.

Mercury emission sources as defined in Minn. R. 7005.0100 subpart 11f.will follow the testing schedule in subpart E.

STAFF WOULD LIKE INPUT ON THIS PART –
Need for testing in general?
Do units have to be identical in #3 or does “substantially similar” work. How to define?
Frequency of retesting?

E. Mercury emission sources as defined in Minn. R. 7005.0100 subpart 11f must test in accordance with subitems (1) to (6) unless the source is already subject to a compliance demonstration for mercury under another applicable requirement, operating permit or enforceable agreement.

1. The owners or operators of a mercury emission source in operation on or before [EFFECTIVE DATEOF RULE] must conduct an initial performance test for mercury emissions on the emission units and processes described in subitem (2). The owners or operators mubmit the test report to the Commissioner within one year of the [EFFECTIVE DATE OF THIS RULE]. The test must be conducted in compliance with the procedures in Minn. R. 7017.2060.
2. The emission units and processes to be tested are those where emission factors or similar calculations indicate actual emissions are 3.0 or more pounds per year of mercury from each unit or process.
3. The owners or operators of a mercury emission source that commences operation after [EFFECTIVE DATE OF RULE] must conduct an initial performance test for mercury emissions within 120 days of initial start up or on a schedule established in an air emission permit or other enforceable agreement and submit the test report to the Commissioner. Start up has the meaning given in Minn. R. ch. 7005.0100 subpart 42a.
4. If a stationary source has mercury emissions from units or processes that are identical, the results of testing from one may be applied to others, scaled for throughput or operating hours, provided that the operation of the sources is substantially similar. With the test results, the owners or operators will provide documentation that the units or processes are identical.
5. After the initial test, the owners or operators must conduct subsequent performance tests within 60 months of each prior test or within 180 days of a physical or operational change, such as increasing capacity or changing fuel types, that results in the potential to increase the amount of mercury emitted to the ambient air. *should this be linked to just when there is a permit modification?*
6. Subsequent performance tests are not required if the owners or operators determine that the stationary source is no longer a mercury emission source in accord with Minn. R. 7005.0100 subpart 11f. If the stationary source becomes a mercury emission source again, the owners or operators must resume conducting subsequent performance tests pursuant to part 7019.3050, item E, subitem (4) within 180 days of making the determination that actual emissions exceed the threshold for a mercury emission source.

7019.3065 **Mercury Material Balance**

If an owner or operator does not have either a CEM to monitor its mercury emissions or a physical location at which to conduct a mercury emissions performance test, the owners or operators of a mercury emissions source may calculate mercury emissions using the material balance method described in this part if inputs and outputs of mercury are known. A person using material balance to calculate mercury emissions must determine the total mercury emissions (E) as follows:

$$E = (A - B - C) * (1 - CE)$$

Where:
A = the amount of mercury entering the process. The amount of mercury used in this calculation must be the amount certified by the supplier, the maximum amount stated on a material safety data sheet or the maximum amount determined by sample analysis using a reference method.
B = the amount of mercury incorporated into the product. Submit an explanation of how this quantity was determined.
C = the amount of mercury, if any, leaving the process as waste, or otherwise not incorporated into the product and not emitted from the controlled stack gases (for example, in fly ash captured by a fabric filter). If the actual mercury content of the waste is unknown, then C = 0.
CE = the overall efficiency, or the product of capture efficiency and control efficiency, of any device used to capture and/or control mercury emissions, expressed as a decimal fraction of 1.00. The overall

efficiency must be based on efficiency factors, as defined in part 7005.0100, subpart 9b, or must be based on the overall efficiency verified by a performance test conducted according to parts 7017.2001 to 7017.2060.

Stakeholder Information Meeting
Preliminary Draft #2 of Mercury Air Emission Rule
July 31, 2012
Minnesota Pollution Control Agency

St. Paul Attendees:
Lea Foushee – NAWO
Dave Godlewski – Teck America
David Hillesheim – Xcel Energy
Rick Rosvold- Xcel Energy
Kelly Gribauval-Hite – Mercury Technologies
Etianne Gribuval – Mercury Technologies
John Crudu – Green Lights Recycling
Doug Hunt – Green lights Recycling
Brain Golob – Green Lights Recycling
Dale Boerjar – Green Lights Recycling
Glenn Geifer – Metropolitan Council,
Douglas Stolowski – Gerdau
Mike Berndt – MN DNR
Jon Bloomberg, Bloomberg & Podpeskar
Bill Hefner – The Environmental Law Group
Keith Hanson – Barr Engineering
Darren Kearney – Xcel Energy
Tim Hagley – MN Power
Isaac Fuhr – Xcel Sherco
Jennifer Engstrom – MN DNR
John Wachtler – Barr
Mike Robertson – MN Chamber
Bill Brice – Consultant
Misty Hanson – MN power
Boise D. Jones – Green Water/EJ
Mike Hansel - Barr

Duluth Attendees:
Trent Wickman, US Forest Service
Bob Tammen, Izaak Walton League
Pat Tammen, Izzack Walton League
Tim Tuominen , WLSSD
Joy Wiecks, Fond Du Lac Band
Kevin Pylka, Polymet
Craig Pagel, Iron Mining Association
Chrissy Bartovich, U. S. Steel
Jamie Baggenstoss, Arcelor Mittal
Teresa Simetkoshy, U.S. Steel

MPCA Staff:
Yolanda Letnes, Barbara Conti, Anne Jackson, Rebecca Walter, Ann Foss, MaryJean Fenske, John Gilkeson, Carol Hubbard, and Frank Kohlasch

Introduction by Frank Kohlash, Air Assessment Section Manager

- Mercury TMDL uses a clean water act piece to reduce mercury emissions in Minnesota.
- Informal comment period; Taking comments on the draft mercury rule through August 24, 2012
- Positive trend reducing mercury emissions in Minnesota headed towards achieving the 789 lb. goal.

Overview of Rule Process – Yolanda Letnes

- Rulemaking is a formal process required by statue
- State Register publications-Request for Comments, Notice, Notice of Adoption
- Draft
- Rule and SONAR available for formal public comment with Notice Publication
- Governor's office has 4 points of review in the process
- Request for comments published by July 2009 & Dual notice expected in December 2012
    - Very Important to submit comment within published deadlines
    - Hearing will be held if 25 hearing requests are received
    - 3 months to finalize if no hearing, 6 months to finalize with a hearing
- Informal draft rule comment period ends August 24, 2012
    - Submit comments to Yolanda Letnes at yolanda.letnes@state.mn.us

Why this rule? Why now?

- Fish Consumption Advisory and impaired waters, (2004 Impaired waters list included 820 lakes and 419 river segments that were considered impaired for mercury)
- MPCA completed a TMDL Study to determine the total maximum daily load.
- Goal for mercury Air emissions is 789 lbs per year.
    - We are making progress although we are not there yet.
- The Stakeholders suggested a rule in the Mercury TMDL Implementation plan
    - The rule adopts federal standards and other efforts to meet goal by 2025
- Initial Draft mercury rule presented to stakeholder group in 2010.
- This year we have met with industry representatives.
- This draft is still an informal working document.
- It's much easier to work with you now than after the rule has been to the reviser's office

Rule Overview:

- Who is affected?
    - Reduction Plans
        - Ferrous mining/processing, lime Kilns, Iron Melting, other sources
        - plans due in 2015-2016 to meet 789 lb. goal by 2025
    - Performance standards – incorporated by reference,
        - List of federal standards included for utilities (MATS),
        - Instructions on how to do monitoring,
        - Industrial Boilers 5D and 6J (Major HAP Sources and AREA sources)
        - Waste incinerators, Sewage sludge incinerators Emission Guidelines
        - Considering one "state only" standard for Recyclers of Mercury
            - based on Wisconsin and Florida Standards
    - Emission Inventory and Testing
        - Annual Reporting if mercury emission source
        - smaller sources on 3 year cycle.

Definitions Section: Next

- First definition section applies to words which are applicable to all sectors
- 3lbs per year: If you are a source that has tested in the past and you are below 3lbs of mercury emission per year would you fall under these rule requirements.
    - Answer – under this proposal there would be no further action on your part for the state rule. We are incorporating federal rules for state enforceability.
- Definition of Mercury –particulate mercury is not included in the rule. If airborne mercury is tied to a particulate then is it included?
    - We are not talking about fugitive release although particulate would be included.
- If a facility emits less than 3 lbs must they report to MCPA,
    - the answer is yes, Air toxics emissions inventory is on 3 year cycle
    - this applies to hg emission sources who will be switched to annual reporting but unlikely to apply to smaller sources on 3-yr cycle.
- Are the definitions lacking? Suggestion to include "sorbent trap monitoring systems" or , "trillion B.thermal unit" into definitions.
    - We only want to include definitions in 7005 that are applicable to all sources. These specific definitions aforementioned would be in section 7007 or 7011.

Inventory :

- If you meet the definition of mercury emission source than you have to report annually. How does that work for a smaller source, because mercury can be found everywhere, even the MPCA cafeteria.
    - In Subp. 4 it is specified how the mercury will be quantified.
    - MPCA does not want to tie people into testing mass balance
        - The point is the mercury is everywhere. Will ambient mercury trigger this requirement? Putting criteria in this subpart would be helpful because we don't want to pick up every small item that is out there.

Testing:

- Relatively few facilities will be testing. Is there a uniform testing standard or monitor that can be used at all facilities that emit mercury?
    - The answer is no although there are rules on how to do a stack test.
        - Sources must follow these standards, test plan with method and procedures on how they will take the measurement.
        - References to federal standard on how to measure mercury for that source.
        - There are different ways to measure mercury dependant on the source. Lower level mercury monitoring has brought forth more complex monitoring, sampling method.
- Is there certainty that the data from the tests is accurate?
    - The test and analysis must be completed by a third party, a Professional testing company. MPCA must review before and after the test.
- Is there public notice for test plans?
    - The testing procedures are in EPA's rules so they were public noticed at the time they went through the rule process.

Reduction Plan Section: Page 2 of draft mercury rule

- List of exemptions ie salvage and shredding facilities.
  - Stormwater rule requires mercury management plan.
- Why are certain facilities required to do air stack testing and some are not?
  - Tiered framework, Performance standards are a higher level of regulation. We will consider if there is another way/ Some facilities are over three pounds. Please give us your feed back.
  - Do we have a limitation of sources under 3 lbs because together they may have greater emissions than one source. We don't want to discourage facilities from making reductions.
  - This rule making is attempting to catch the large sources. As large sources decrease the smaller sources become a bigger percentage of the problem.
- Submital deadline for reduction plans. Is that conistant with the dates within the TMDL Implementation Plan.
  - Yes
- There are a few sources that have 2020 for a submittal date in the TMDL document.
  - Those sources now have a federal standard so that overrides the need for MPCA to ask for a reduction plan. MPCA will confirm.
- Subp. 5 – plans are likely to change often: need simple process to accommodate that.
- Ferrous mining 28% of 2010 level. The goal in the implementation plan was industry wide. Now there are individual source goals. We have different kinds of furnaces and specifically had a sector wide goal rather than facility goal because some controls don't work on some furnaces.
  - The language is trying to allow the reduction to take place, at a single stationary source, or multiple stationary sources. The rule acknowledges that there are different ways to make the reductions. Multiple sources under common control. Still the entire facilities are different.
  - If the industry would like to come forth as an entire industry with an enforceable plan MPCA will consider it.
    - It must be enforceable.
  - Please submit language adjustments which address your concern.
- 28% of 2010, is confusing, why don't you just put the number you would like us to meet? If you want us to be at 210 just put it in there.
  - That commitment was made with the numbers that were available at the time. Both carry forward the goals for the TMDL and is enforceable.
- 6D – plan must show that the source is achieving the lowest emission rate. Will it be further defined?
  - MPCA was thinking achievable for the facility.
- Is "lowest achievable emission rate" is this a clean air act term and are you adopting the definition from clean air act?
  - This was not the intent. MPCA will take this into consideration and revise
- Approval process, the commissioner will review and approve the plan. Define the term.
  - MPCA wanted to avoid using "good faith effort"
- 7B page 4 – It does not seem consistent with giving specific goal.

- MPCA is determining how to process the plans and make them enforceable.
- Attorney General will clarify if we need both sections B and E. B is at reasonable progress for TMDL. The rest of it is aimed at the plan itself.
- Note if Commissioner should reject the plan in 7B, that way you have to edit it until it is approved. Another alternative is the Commissioner could request or require the facility to modify the plan. Subpart 8 could discuss conditions for re-opening plans.

· 5C: was the plan public noticed? Who is approving the initial plans and follow up plans?
- The question resides around how the MPCA will manage these plans. Will they be stapled to the permit or will we open the permits to attach them.
- There is a lot of trial and error in the stage we are at. If every modification has to go through rule making progress will come to a halt. Deal with plans administratively, modify the plan relatively quickly yet it is enforceable.
- MPCA will look into it, sensible way to handle changes to these plans.

Performance Standards

· 7011 Codify standards for stationary sources. . 7011.0561 Control Mercury from Electric Generating Units
- What is the relationship between this section and MATS? IF the federal government eliminated MATS will this section stay?
  - Answer Yes.

· Clarification on unit operating hour –The definition implies that flue gases passing through the stack from fan operation alone would be counted as an operating hour.
- Not intended. Will check language.

· Subp. 4A continuous mercury monitoring at "outlet of the last air pollution control device" rather than the "stack" because their could be other types of equipment inbetween the two. Is Air pollution device defined.? How about measure in a representative sampling location –it has definition and you could use "stack" or "duct work".
- MPCA will double check to be sure it matches the description in other standards.

· Subp. 5C2 page 6 Conduct weekly, 168 operating hours? Better phrase would be once each calendar week for integrity checks. Otherwise the tests may have to be on the weekend.
- The MATS rule requires 168 hours.

Performance standards for waste combustors and waste incinerators, sewage sludge incinerators, and commercial/industrial/institutional boilers.
No comments

Mercury Recycling, Mercury containing products:
This sector has relatively high emissions, possibly over 3 lbs.

· Would it be possible for the Agency to provide to the group how the inventory number was obtained , where the 68 lbs was derived from?
- Yes, It is within the Mercury TMDL . MPCA will send out emissions inventory.

· Green Lights – History in the industry goes back to the 90s in Recyclights, he helped develop the rules in Florida. Processing equipment was in a designated room, not a large room with mercury

control. The proposed rules would create a burden. They are based on equipment that is in a large room not a designated room like the way it is in MN.
    - The intent is Dust control followed by Mercury Control – Subp. 2B Required controls are HEPA filters followed by carbon filter.
- Comment two carbon filters in a series is better, Florida has an option to do that.
    - MPCA will take under advisement we were trying to have additional cost.
    - Florida rules are structured differently – There are OSHA, HW requirements we are focusing on controlling air emissions only.
    - What is an alternative to having the process in it's own space? Should we say control every source? If you have suggestions on how to better lay it out or give range. Please let us know your comments.

- Subp. 1. Collection facilities, people are collecting less than 1000 lights are exempt. house hold hazardous waste sites and they have greater than 1000 lights.
    - MPCA will reconsider as to whether this is a reasonable exemption on not.

- Page 1 Mercury emission source definition. Understanding was that the program was never meant to deal with mercury emissions that are at ambient temperature only heated or volatilized. The way it is written rock crushers may be included. A rock crusher is a point source. Please clarify so that rock crushers are not included under the rule.
    - MPCA will consider revising. The intent is not to include dust.

Comments:

- Please be specific in your comments.
- What type of changes would be good for your facility?
- We are open to making changes if needed.
- Please submit written informal comments by August 24, 2012 to Yolanda – contact information is <yolanda.letnes@state.mn.us>
- Informal comments will be placed on the MPCA Draft Mercury Rule website.

Informal comments submitted in response to Preliminary Draft #2 language will be considered. No individual responses to informal comments are planned. Changes as a result of informal submitted comments will be included in the formal rule draft that is published along with the Notice in the State Register, which is anticipated in December 2012.

From:	Wickman, Trent R -FS
To:	Letnes, Yolanda (MPCA)
Cc:	Fenske, MaryJean (MPCA)
Subject:	written comments on draft #2 of mercury air emission rule
Date:	Tuesday, July 31, 2012 4:54:57 PM

Here are my comments on the rule:

There is an overall lack of transparency in this rule. There should be more opportunities for public notice and comment. Examples are:
MR 7007.0502, Subp. 5 (B) and (C)
MR 7007.0502, Subp. 7 (A), (B), (C), and (F)

Providing a simple opportunity for public input does not significantly affect the length of time to obtain or make changes to reduction plans if there is a 30 day comment period and the agency then provides answers to the comments.

The definition of Mercury Emission Source under MR 7005.0100, Subp. 11f is based on actual emissions. Actual emissions are unenforceable. Sources could be subject to the rule and the MPCA and public would never know except in the rare case that the facility is inspected AND the specific records are reviewed by the inspector AND the records are accurate.

The definition of Mercury Emission Source under MR 7005.0100, Subp. 11f excludes fugitive emissions. It would appear that for some source categories the majority of their emissions could be classified as fugitive (foundries, lamp recyclers, salvage yards)

MR 7007.0502, Subp. 6 (A)(1) – The first sentence reads that the emissions "are" 28% of the 2010 emissions. Should it not read "shall not exceed"?

MR 7007.0502, Subp. 6 (A)(1) – the last sentence seems to require all sources that obtained a construction permit (both new and modified sources) and that started operating after 2010 would be subject to the 28% of PTE limit. Would this be required on top of any mercury controls determined to be applicable through permitting? Does this continue to apply to new plants in the future? How does this apply to Essar Steel and the Keetac expansion?

I support MR 7007.0502, Subp. 6 (A)(2) because without distributing the amount of mercury allocated to the industry (210 lbs) out to the individual plants or owners, there is no accountability or enforceability to this section of the rule. It would be more clear to allocate the 210 lbs taconite total out to the individual owners and then allow them to choose how to meet it with the number of furnaces they have within their company. Using 28% of a number that is not in the rule is confusing and unclear – instead of just using 210 lbs distributed out to the owners.

Trent Wickman, P.E.
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August 21, 2012

Yolanda Letnes
Municipal Division
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Dear Ms. Letnes:

SUBJECT: OTTER TAIL POWER COMPANY
INFORMAL COMMENTS ON DRAFT MERCURY RULEMAKING

Enclosed are Otter Tail Power Company's informal comments on the draft mercury emissions rulemaking for implementing the Statewide Mercury TMDL. For this informal comment period, Otter Tail simply highlighted parts of the rule where we wished to comment, and then added comments on the right side of the page.

If you have any questions on the comments, please do not hesitate to contact me at 218.739.8526 or at mthoma@otpco.com.

Sincerely,

Mark Thoma
Manager, Environmental Services

Enclosure

E. **Operating hour.** "Operating hour" means a clock hour in which a unit combusts any fuel or gases flow through a monitored stack or duct either for part of or for the entire hour.

F. **Operating quarter.** "Operating quarter" means a calendar quarter in which there are at least 168 operating hours.

Subp. 2. Coal-fired EGUs not subject to this part. The owners or operators of a coal-fired EGU is not subject to the requirements of part 7011.0561 if one of the conditions below applies.

A. The coal fired EGU is determined to be a minimally-emitting unit as defined in subpart 8.

B. The coal fired EGU did not combust coal for more than 10 percent of the average annual heat input during any 3 calendar years or for more than 15.0 percent of the annual heat input during any calendar year.

Subp. 3. Performance Standards for Mercury Emissions. Unless the Commissioner establishes an alternative mercury emissions reduction under the provisions of Minn. Stat. 216B.687, subd. 3, the owners or operators of coal-fired units that do not qualify for exemptions under subpart 2 shall control mercury emissions as described in this subpart.

A. By January 1, 201X, or within 180 days of determining the unit is no longer a minimally-emitting unit, owners or operators of a coal-fired EGU with a nameplate electricity generation capacity greater than 100 MW shall control mercury such that 90 percent of the mercury present in the fuel when combusted is captured and not emitted, or shall demonstrate that the unit emits no greater than 0.8 pounds per trillion British thermal units (lb/Tbtu) of mercury, whichever is least stringent.

B. By January 1, 2026, or within 180 days of determining the unit is no longer a minimally-emitting unit, owners or operators of a coal-fired EGU that is not a supplemental unit as defined in Minn. Stat. §§ 216B.682 to 216B.688, and with a nameplate capacity less than or equal to 100 MW shall control mercury such that 70 percent of the mercury in the fuel when combusted is captured and not emitted, or demonstrate that the unit emits no greater than 2.3 lb/Tbtu of mercury, whichever is least stringent.

C. By January 1, 2014, owners or operators of a coal-fired EGU that is a supplemental unit as defined in Minn. Stat. §§ 216B.682 to 216B.688, must control mercury such that 70 percent of the mercury in the fuel when combusted is captured and not emitted, or demonstrate that the unit emits no greater than 2.3 lb/Tbtu of mercury, whichever is least stringent.

Subp. 4. **Monitoring mercury emissions. The owners or operators of a coal-fired EGU shall monitor mercury emissions as described in this subpart.**

A. Coal-fired units with a generating capacity equal to or greater than 250 MW (net) shall continuously monitor mercury at the outlet of the last air pollution control device. A continuous monitor is either a Continuous Emissions Monitoring System (CEMS) for mercury or a sorbent trap monitoring system capable of monitoring mercury as described in this part.

(1) Prepare a monitoring plan for the monitoring system. If the system is a CEMS for mercury, prepare the plan to address the requirements of subpart 5. If the system is a sorbent trap system, prepare the plan to address the requirements of subpart 6.

(2) If applicable federal regulations establish requirements for installation and operation for continuous monitoring of the coal-fired EGU, the monitoring plan shall describe the compliance procedures for the monitor(s) according to the federal regulation. If there are no applicable federal regulations, the monitoring plan shall address the remaining requirements of this subpart for installing, calibrating and operating a continuous mercury monitor.

B. If a coal-fired unit with a generating capacity less than 250 MW does not use a CEMS or a sorbent trap monitoring system to monitor mercury, conduct performance testing for mercury according to the provisions of this item once every 12 months, and complete the test no more than 13 months after the previous test. Performance stack tests for mercury may be performed less often if the performance tests for

Author: rdd1 Subject: Highlight Date: 8/20/2012 9:56:33 AM

Comment 1: 7011.0561 Subp. 4. Otter Tail suggests modifying the first sentence and adding a second sentence such that it would read: "By the date specified in 7011.0561 Subp. 3, the owners or operators of a coal-fired EGU shall monitor mercury emissions as described in this subpart. For sources subject to 7011.0561 Subp. 3.B, the owners or operators must conduct a performance test to determine mercury emissions in compliance with the procedures of Minn Chapter 7017 by October 13, 2015, unless the source is already subject to a monitoring requirement by that date under another applicable requirement, operating permit, or enforceable agreement."

The reason for the suggested change to the first sentence in 7011.0561 Subp. 4 is because there needs to be clarification as to the date when monitoring requirements must begin. Otter Tail believes that the monitoring requirement date needs to be tied to 7011.0561 Subp. 3. In lieu of this change, there is a conflict for sources subject to 7011.0561 Subp. 3.B in the date by which they need to control mercury and the date by which they need to monitor for compliance.

The reason for the suggested added second sentence is to protect against EGU's that fit into 7011.0561 Subp. 3.B from not having to test for mercury emissions if there is a delay to the MATS rule.

at least 3 consecutive years show that mercury emissions are at or below 50 percent of the applicable limit and if there are no changes in the operation of the EGU or air pollution control equipment that could increase emissions. In this case, performance testing may be conducted once every 3 years, but no longer than 37 months after the previous performance test.

(1) Performance testing shall be conducted using Code of Federal Regulations title 40 part 60 Appendix A-8, Method 30B. **The initial performance test shall be conducted for 30 boiler operating days.** Sorbent traps shall be used no longer than 10 days. Subsequent performance tests may be 10 days long.

(2) Determine compliance by calculating the average mercury concentration from all sorbent trap results.

(3) If emissions are determined to be greater than 50 percent of the applicable limit, annual testing shall be resumed until 3 consecutive years demonstrates that emissions are equal to or below 50 percent of the applicable limit.

(4) Conduct performance tests in accordance with Minn. R. part 7017.2001 to 7017.2060 unless modified by this subpart.

Subp. 5. **Monitoring provisions for CEMS that monitor mercury.** These monitoring provisions apply to the measurement of mercury from coal-fired unit using a CEMS for mercury. A CEMS for mercury means the total equipment required to measure the total vapor phase mercury concentration consisting of three major subsystems: sample acquisition, transport and conditioning, mercury converter and analyzer, and a data acquisition and handling system.

A. The monitoring plan for the CEMS to measure mercury shall include following:
   (1) A description of the CEMS span value along with justification for its selection.
   (2) Methods, procedures, equations, and performance specifications (both main and alternate) to be used to conduct a certification test of the CEMS for mercury. The Certification shall include a 7 day Calibration Error Test, a Linearity Check, a Three Level System Integrity Check, a Cycle Time Test, and a Relative Accuracy Test Audit as described in 40 CFR Part 60, Appendix A.
   (3) Methods, procedures, equations and performance specifications to be used for ongoing Daily Calibration Error Test, System Integrity Check, Linearity Check or Three Level System Integrity Check, and a Relative Accuracy Test Audit tests. Calculate relative accuracy as described in section 12 of Performance Specification 2 or 6 in appendix B to 40 CFR Part 60
   (4) A description of calculations used to convert mercury concentration values to the appropriate units of the emission standard.

B. Operate the CEMS in compliance with the requirements of Minn. R. 7017.0100, 7017.1002, 7017.1030, 7017.1080 to 7017.1130, 7017.1150, and 7017.1180.

C. Conduct the routine quality assurance and control tests on a frequency as follows:
   (1) Calibration error test shall be conducted daily using either mid- or high-level gas. The calibrations are not required when the unit is not in operation.
   (2) Single level system integrity checks shall be conducted weekly meaning once every 168 operating hours for systems with mercury converters. This test is not required if daily calibrations are done with National Institute of Standards and Technology-traceable source of oxidized mercury.
   (3) Linearity checks or 3-level system integrity checks shall be conducted quarterly in each QA operating quarter and no less than once every 4 calendar quarters.
   (4) Relative Accuracy Test Audit shall be required annually meaning once every 4 quality-assured operating quarters. This deadline may be extended for non quality assured operating quarters up to a maximum of 8 quarters from the quarter of the previous test.
   (5) A 720 hour grace period will be allowed for RATAs.

D. Calibration gas mercury concentrations used to conduct quality assurance tests on CEMS shall have the following concentrations:

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Author: rdd1 Subject: Highlight Date: 8/20/2012 12:58:08 PM

Comment 2: 7011.0561 Subp. 4.B (1). Otter Tail suggests amending the highlighted sentence to read as follows: "The initial performance test shall be conducted for 30 boiler operating days under all process operating conditions." This is consistent with the MATS Rule and it would be unrealistic to operate at high load for 30 days.

results in units of lb of Mercury/Tbtu and pounds of Mercury per year, using the expected fuel input over a year period. Alternatively, calculate pounds of mercury per year using the average mercury concentration, average stack gas flow rate, average stack gas moisture, and maximum operating hours per year.

D. Record parametric data for air pollution control devices in place during the performance test.
E. Operate air pollution control devices to continue removing mercury from the flue gases as described in Subp. 9.
F. Repeat the performance test once every five years to demonstrate that the EGU remains a minimally-emitting unit.

Subp. 9. **Operating Requirements for Mercury Controls.** For each of the air pollution control devices employed at the time that a performance test is conducted and compliance is demonstrated, owners or operators of a coal-fired EGU must maintain the listed operating limit in items A to C.

A. ~~Fabric filter control.~~ Install and operate a bag leak detection system and operate the fabric filter such that the bag leak detection system does not initiate alarm mode more than 5 percent of the operating time during each 6-month period.
B. Dry scrubber, dry sorbent injection or carbon injection. Maintain the sorbent or carbon injection rate at or above the lowest 1-hour average sorbent flow rate measured during the most recent performance test demonstrating compliance with the mercury emissions limit.
C. Operating load. For coal-fired EGUs that rely on performance testing, maintain the operating load of each unit such that it does not exceed 110 percent of the average operating load recorded during the most recent performance test.

Subpart 10. **Incorporation by reference.** For purposes of complying with this part, the documents listed below are incorporated by reference, as amended. These documents are available through the Minitex interlibrary loan system. They are subject to frequent change.

(1) Annual Book of American standards and testing methods? (ASTM) method
(2)

Minn. R. 7011.0563 INCORPORATION OF EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FROM COAL AND OIL-FIRED ELECTRIC UTILITY STEAM GENERATORS

Code of Federal Regulations, title 40, part 63, subpart UUUUU, as amended, entitled "National Emission Standards for Hazardous Air Pollutants from Coal- and Oil-fired Electric Utility Steam Generating Units" is incorporated by reference, except that the authorities identified in section 63.10041(b) are not delegated to the commissioner and are retained by the administrator.

7011.1201 DEFINITIONS

Subp. 12. [See Repealer] ~~**Class D waste combustor.** "Class D waste combustor" means that the design capacity of a waste combustor unit is 3.0 x 10^6 Btu/hr or more, combusts waste other than mixed municipal solid waste or RDF, and was operating on or before December 20, 1989.~~

Subp. 13. **Class I waste combustor.** "Class I waste combustor" means that the design capacity for a municipal waste combustor unit is 93.75 x 10^6 Btu/hr or more, and that construction of the unit is commenced after September 20, 1994, or modification or reconstruction is commenced after June 19, 1996.

Page: 14

Author: rdd1 Subject: Highlight Date: 8/20/2012 11:13:49 AM

Comment 3: 7011.0561 Subp. 9. Otter Tail suggests modifying the following sentence: "For each of the air pollution control devices employed at the time that a performance test is conducted ~~and compliance is demonstrated~~ for purposes of compliance with 7011.0561 Subp. 3, owners or operators of a coal-fired EGU must maintain the listed operating limit in items A to C."

Note that the reference to operating limits in items A to C may need to be changed consistent with Otter Tail's subsequent comments.

Author: rdd1 Subject: Highlight Date: 8/20/2012 10:22:02 AM

Comment 4: 7011.0561 Subp. 9.A. Otter Tail believes this paragraph should be removed. Compliance Assurance Monitoring (CAM) will already be incorporated into each sources Title V air permit to ensure proper operation of fabric filter controls. This is also inconsistent with MATS.

Author: rdd1 Subject: Highlight Date: 8/20/2012 10:22:28 AM

Comment 5: 7011.0561 Subp. 9.C. Otter Tail believes this paragraph should be removed. Since 7011.0561 Subp. 4.B(1) requires a 30 day test, an operating load restriction is excessively stringent. Otter Tail believes this would preclude anyone from using performance testing as a monitoring option. This is also inconsistent with MATS.

From: Hensel, Melba
To: Letnes, Yolanda (MPCA); Conti, Barbara J (MPCA)
Subject: Sewage Sludge incineration in Minnesota
Date: Tuesday, August 21, 2012 4:18:40 PM

I've noticed in the information on the mercury emissions rule that Buffalo Lake keeps popping up as the incinerator system other than the MCES units at Metro and Seneca. It's actually BUFFALO. Since no one else has corrected it, I thought I'd bring it to your attention. Since Buffalo Lake is a small farming community in Renville County, and Buffalo is suburban Metro in Wright County, there's a significant difference in size and location.

Here's the permit information.

http://www.pca.state.mn.us/index.php/view-document.html?gid=11125

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August 24, 2012

Ms. Yolanda Letnes
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, MN 55155

Email: yolanda.letnes@state.mn.us

Re: Xcel Energy Comments on MPCA's Proposed Mercury Air Emissions Rule for Implementing the Statewide Mercury TMDL

Dear Ms. Letnes:

Xcel Energy Inc. ("Xcel Energy") submits these comments regarding the Minnesota Pollution Control Agency's ("MPCA") Proposed Mercury Air Emissions Rule for Implementing the Statewide Mercury Total Mass Daily Loading ("TMDL").

Xcel Energy is a major U.S. electricity and natural gas company with regulated operations in eight Western and Midwestern states (Colorado, Michigan, Minnesota, New Mexico, North Dakota, South Dakota, Texas and Wisconsin). We provide a comprehensive portfolio of energy-related products and services to 3.4 million electricity customers and 1.9 million natural gas customers. Xcel Energy's generating units are capable of producing over 17,000 megawatts ("MW") of electricity, using a variety of fuel sources including coal, natural gas, oil, nuclear, renewables and hydropower. Our generating units in Minnesota are directly affected by the proposed mercury rules.

Xcel Energy appreciates the opportunity to comment on the proposed rule. We submit the comments below to encourage the MPCA to make changes in the final rule to address the issues identified below.

1. Mercury definition must be modified to exclude mercury in particulate form. (page 1, Chapter 7005.0100, Subp. 11e)

Mercury occurs in two primary forms: elemental mercury (Hg^0) and inorganic mercury (Hg^{2+}). Elemental mercury is the pure silvery-white form found in rocks and minerals. It does not combine with other chemicals. Inorganic mercury can combine with other chemicals to form compounds. Combustion may release both elemental and inorganic mercury from materials containing them. Combustion also releases fine particles that may carry small amounts of mercury bound to their surfaces. Particulate mercury is usually

released in very small percentages of the total mercury released. In addition, particulate mercury is typically captured with traditional particulate control devices. As such, including particulate mercury from combustion activities in the definition is not necessary as it is typically captured already and does not need to be specifically targeted.

It should be further noted that mercury found in rocks and minerals will adhere to particles in those rocks and minerals during the rock crushing process. By including particulate mercury in the rule, the MPCA is greatly expanding the number of sources subject to it for the simple reason that rock crushing equipment will be included. MPCA stated at the public meeting on July 31, 2012 that their intention was not the inclusion of fugitive releases. Xcel Energy recommends that MPCA clarify the definition of mercury to specifically exclude particulate mercury from this definition.

2. **Change the actual mercury emissions threshold of 3.00 pounds per year to 3 pound per year. (page 1, Chapter 7005.0100, Subp. 11f)**

The definition of "mercury emission source" uses an actual mercury emissions threshold of 3.00 pounds per year. This is more significant digits than used in the TMDL itself, which used only 1 significant digit, specifying 3 pounds per year[1]. Xcel Energy recommends changing this value to reflect a threshold using 1 significant digit or 3 pounds per year to match the TMDL itself. In any case, the accuracy of monitoring or testing methods currently used for mercury monitoring is limited to the use of no more than two significant digits or 3.0 pounds per year.

3. **Clarification is needed on the citation on page 2, Chapter 7007.0502, Subp. 4.A.**

Specifically, this subpart reads,

> "The owners or operators of a mercury emission source that does not meet an exception under subpart 3 must prepare and submit a Plan to the Commissioner for approval no later than June 30, 2015, ***or as provided under item D.***" (emphasis added)

Chapter 7007.0502, Subp. 4 does not contain an item D so it is difficult to understand where the citation is directing the reader. A simple clarification is needed to make this more understandable.

4. **The subpart addressing mercury emissions reduction plan elements and formats does not define the term optimize. (page 2, Chapter 7007.0502, Subp. 5.A.(3))**

Xcel Energy believes that the term "optimize" must include consideration of cost effectiveness in conjunction with the ability to remove mercury. Initially, it may be possible to achieve significant mercury reductions at relatively low costs. As time progresses and control system operational knowledge increases, operators will determine the point of

---

[1] "Implementation Plan for Minnesota's Statewide Mercury Total Maximum Daily Load" October 2009, page 19, "For new or modified facilities emitting more than ***3 lb/yr*** (after applying best controls) the facility will offset those new emissions by arranging a reduction equal to the new emissions from existing sources in the state beyond those otherwise required in the reduction strategy for the existing sources." (emphasis added)

diminishing returns where slight improvements in mercury removal can be achieved at extremely high cost. This situation needs to be anticipated in the rule by giving weight to economic as well as emission removal considerations.

5. **Compliance with the mercury emissions reduction plans needs to be smooth and transparent. (page 4, Chapter 7007.0502, Subp. 7)**

   During the public meeting on July 31, 2012, several comments were made regarding the compliance requirements with the mercury plans found in Subp. 7. Xcel Energy encourages MPCA to specify in the rule how it will implement these plans into enforceable documents (i.e., permits, memorandums of understanding, administrative orders, etc.). MPCA stated that they are seeking the best efforts of sources to reduce mercury emissions. Xcel Energy encourages MPCA to make changes needed to ensure a smooth and transparent process.

6. **The definition of operating hour should focus on fuel combustion rather than on flue gas flow. (page 5, Chapter 7011.0561, Subp. 1.E)**

   Xcel Energy recommends deleting all reference to gases flowing through a stack or duct. Mercury monitoring and control should occur when there is combustion present and should not be required when it is not. We recommend that this section read:

   > "Operating hour" means a clock hour in which a unit combusts any fuel ~~or gases flow through a monitored stack or duct~~ either for part of or for the entire hour.

7. **The time provided to install mercury controls is inadequate. (page 5, Chapter 7011.0561, Subp. 3.A. and 3.B)**

   In this section of the rule, owners or operators of a unit are directed to install mercury controls within 180 days of determining that the unit is no longer a minimally emitting unit. The electric generating unit Mercury and Air Toxics Standards rule allows 3 years to comply as it recognizes that facilities need time to budget for, design, install and commission these controls. For practical purposes 180 days is too short of time to complete all of the activities required as part of installing mercury controls. Xcel Energy recommends changing 180 days to 3 years.

8. **The monitoring location requirement for mercury emissions needs clarification. (page 5, Chapter 7011.0561, Subp. 4.A)**

   Xcel Energy suggests, for the sake of clarification, modifying this section to read:

   > "Coal-fired units with a generating capacity equal to or greater than 250 MW (net) shall continuously monitor mercury at <u>a representative sampling location following</u> the outlet of the last air pollution control device..."

9. Eliminate some monitoring detail from the rules and make these requirements part of the monitoring plan that must be submitted and approved prior to monitoring. (page 7, Chapter 7011.0561, Subp. 5.H)

As discussed during the public meeting on July 31, 2012, we recommend deleting Subpart 5.H. and replacing it with a requirement for the Monitoring Plan to have a missing data substitution proposal that must be approved by MPCA.

10. Setting emission limits for sources subject to mercury rules. (page 7, Chapter 7011.0561, Subp. 5.I through 5.K)

Subparts 5.I, 5.J, and 5.K all deal with emission limits. During the public meeting on July 31, 2012, MPCA expressed interest in instituting a two part mercury limit similar to that used for municipal waste combustors. Xcel Energy supports a dual limit consisting of complying with either a pound per trillion BTU limit OR a percent removal limit based on 90% reduction from the mercury content of the fuel. In addition, Xcel Energy is open to the concept of requiring a periodic coal analysis requirement (e.g., every 5 years) and supports the idea that sources can retest the fuel supply whenever the source chooses to in order to have quality fuel mercury content data.

11. Eliminate some monitoring detail from the rules and make these requirements part of the monitoring plan that must be submitted and approved prior to monitoring. (page 7, Chapter 7011.0561, Subp. 6.A.(3))

The maximum sampling time that a sorbent trap is used should be addressed in the facility's Monitoring Plan rather than in the rule. We recommend removing Chapter 7011.0561, Subp. 6.A.(3).

12. Eliminate some monitoring detail from the rules and make these requirements part of the monitoring plan that must be submitted and approved prior to monitoring. (page 8, Chapter 7011.0561, Subp. 6.G)

As discussed during the public meeting on July 31, 2012, we recommend deleting Subpart 6.G and replacing it with a requirement for the Monitoring Plan to have a missing data substitution proposal that must be approved by MPCA.

13. Serting emission limits for sources subject to mercury rules. (page 8, Chapter 7011.0561, Subp. 6.H through 6.J)

Subparts 6.H, 6.I, and 6.J all deal with emission limits. During the public meeting on July 31, 2012, MPCA expressed interest in instituting a two part mercury limit similar to that used for municipal waste combustors. Xcel Energy supports a dual limit consisting of complying with either a pound per trillion BTU limit OR a percent removal limit based on 90% reduction from the mercury content of the fuel. In addition, Xcel Energy is open to the concept of requiring a periodic coal analysis requirement (e.g., every 5 years) and supports

the idea that sources can retest the fuel supply whenever the source chooses to in order to have quality fuel mercury content data.

14. Provide language that allows alternative fuel sampling and analysis methods subject to approval by the Commissioner. (page 8, Chapter 7011.0561, Subp. 7)

ASTM standards are often overly burdensome for fuel sampling and analysis. Xcel Energy proposes that language be included in this subpart to allow the Commissioner to approve alternate methods to those in the ASTM standards, which are less burdensome but still provide statistically valid data.

15. Eliminate the language on operating requirements for mercury controls. (page 9, Chapter 7011.0561, Subp. 9)

MPCA indicated during the Public Meeting on July 31, 2012 that they were considering deleting Subpart 9 as it is not needed. Xcel Energy supports the removal of this section and agrees that this information is better addressed in the site-specific mercury emissions reduction plans.

16. The new air quality standards for recycling of mercury and mercury-containing products blur the lines between air quality and solid waste rules. (page 15, Chapter 7011.4000 through 7011.4050)

Xcel Energy is concerned that this air quality rule appears to be crossing over into solid waste rules jurisdiction. Xcel Energy believes that for clarity sake, air quality rules should be contained to issues pertaining to air emissions and that solid waste rules should be contained to solid waste issues.

It is clear that the rules related to air emissions from recycling facilities are subject to air quality rules designed to prevent the release of mercury to the atmosphere. However, it is less clear that the storage and material handling portions of this proposed rule are best served as part of the air quality rules as they are dealing with proper handling of lamps and other mercury-containing products. We believe that the storage and material handling portions of this proposed rule are best served as part of the solid waste rules rather than in the air quality rules.

17. The performance requirements for collection facilities for mercury containing products needs revision. (page 16, Chapter 7011.4020. Subp. 1)

Xcel Energy operates multiple facilities that aggregate lamps, mercury-containing products and devices that the company has generated prior to shipment to a recycling facility. As a result, we have two main concerns.

The first concern is that MPCA has not defined the terms "collection facility" or "recycling facility". These definitions are needed to clarify applicability of the rules.

Our second concern is about the details of the performance requirements for collection facilities. In particular, we have concerns about Subpart 1.A, which states:

> "Material handling. Conduct all sorting, consolidation, and handling activities in a ***fully-enclosed area*** and in a manner that minimizes breakage of mercury-containing products". *(emphasis added)*

Our question is what does a "***fully-enclosed area***" mean? Does it mean the same thing as "Enclosed storage" as described on page 17 Subpart 2 (A)(1) of the proposed regulations as it pertains to the volume reduction and mercury recycling facilities (lamp recyclers)? We understand this section does not apply to collection facilities, but it clearly states that lamp recyclers must store lamps indoors and not outdoors.

We believe the true intent of this requirement is to ensure that material handling is conducted indoors, out of the elements to minimize breakage and loss of mercury as a result of outside environmental risks such as storms, accidents or vandalism. Our lamp management areas are separate, designated areas for storage, located within a building that provides cover from the outside environment that could potentially damage spent lamps. While this storage may not meet the definition of fully-enclosed area, it fully meets the true intent of ensuring that material handling is conducted indoors, out of the elements to minimize breakage.

Xcel Energy recommends that that Subpart 1.A be revised to reflect this true intent as follows:

> "Material handling. Conduct all sorting, consolidation, and handling activities in <u>an indoor area protected from outside elements</u> and in a manner that minimizes breakage of mercury-containing products".

Without this language change, we will need to modify our facilities needlessly to become fully-enclosed facilities.

18. Mercury monitoring methodology at the property boundary needs to be clearly identified in the rule. (page 19, Chapter 7019.3000. Subp. 4)

The monitoring methodology needed to "detect" mercury concentrations at the property boundary needs to be clearly identified in the rule in order to avoid confusion and misinterpretation at a later date. MPCA needs to clearly specify how mercury concentrations would be monitored to ensure that proper instrumentation and sampling methodology is followed.

Thank you for the opportunity to provide comments on the proposed permanent rules relating to air emissions permit requirements. Please feel free to contact me if you have any questions at 612-330-7879 or richard.a.rosvold@xcelenergy.com.

Sincerely,

Richard A. Rosvold

Richard Rosvold
Manager, Air Quality
Environmental Policy & Services
Xcel Energy Inc.

From:	William Hefner
To:	Letnes, Yolanda (MPCA)
Cc:	Shiv Srinivasan
Subject:	Comments on Draft CISWI Rules Within "Preliminary Draft #2" of Statewide Mercury TMDL Rules
Date:	Friday, August 24, 2012 1:41:04 PM

Dear Ms. Letnes:

My client, Fibrominn LLC ("Fibrominn"), has asked that I submit the following comments on its behalf regarding the draft Commercial and Industrial Solid Waste Incinerator ("CISWI") rules contained within the Minnesota Pollution Control Agency's "Preliminary Draft #2" ("Draft #2") of its proposed mercury air emission rules. Fibrominn appreciates this opportunity to provide feedback on these draft rules and respectfully submits the following comments to draft rule Minn. R. 7011.1360:

- Subparts 1.D and 1.E: These subparts both require that the Minnesota Pollution Control Agency ("MPCA") Commissioner "approv[e] a determination that the qualifying cogeneration facility [seeking a determination it is not a CISWI] is combusting homogenous waste as that term is defined at 40 CFR 60.2875." EPA's proposed modification to 40 CFR 60.2555(e)(3) and (f)(3) suggests the EPA Administrator, not the MPCA Commissioner, will ultimately make this determination. *See* 76 Fed. Reg. 80510, proposed changes to 40 CFR 60.2555(e)(3) and (f)(3) ("[The state must] *submit a request to the Administrator* that the qualifying cogeneration facility is combusting homogeneous waste as that term is defined in § 60.2875") (Emphasis added). In light of the proposed changes to the EPA's regulations, Fibrominn has the following questions and comments:

  - Will the EPA retain the ultimate authority to determine whether a "qualifying cogeneration facility" is combusting "homogeneous waste," even after the EPA approves Minnesota's Clean Air Act section 111(d) plan regarding the MPCA's proposed CISWI rules? If so, what is the "determination" the MPCA Commissioner is "approving" under proposed Minn. R. 7011.1360, subps. 1.D and 1.E?

  - Fibrominn respectfully suggests subparts 1.D and 1.E be revised so as to make clear who – between the EPA Administrator and the MPCA Commissioner – has the ultimate authority to make the "homogeneous waste" determination.

- Subpart 2: The final sentence of this subpart requires CISWIs operating on the effective date of the rule to submit a "control plan" to the MPCA Commissioner within 180 days of the rule's effective date. The proposed subpart does not specify what control plan's purpose is or what it must contain. Fibrominn assumes the "control plan" must identify how the CISWI will come into compliance with 40 CFR 60.2575 - .2875 "no later than March 16, 2016 or three years after EPA approves a 111(d) plan incorporating this rule, whichever is earlier." Please verify Fibrominn's interpretation of the meaning and purpose of the "control plan" under subpart 2 is correct or, if not, please clarify what the MPCA means by "control plan" in this context. Please also provide guidance and clarification as to the control plan's content.

- Subpart 5: This draft subpart states, "If accurate and valid data results of a performance test demonstrate an exceedence of an emissions standard described in part 7011.1370 or in the facility [sic] air emissions permit after normal start-up, the owners or operators of a [CISWI] shall undertake the actions in items A to D." Fibrominn has two concerns with proposed subpart 5:

    - Proposed rule Minn. R. 7011.1370 incorporates by reference the new source performance standards for new CISWIs at 40 CFR Part 60, Subpart CCCC. The above language from subpart 5 therefore subjects existing CISWIs to the standards EPA intended for new CISWIs. This is inconsistent with subpart 2, which requires existing facilities to comply "with the requirements of part 7011.1365," i.e., the standards for existing CISWIs under subpart DDDD, no later than March 16, 2013 or three years after EPA approves MPCA's 111(d) plan. Fibrominn respectfully requests the MPCA amend subpart 5 to change the reference to "the standard described in part 7011.1365," in order to make subpart 5 consistent with subpart 2 and EPA's regulations on existing CISWIs.

    - As stated above, subpart 2 establishes a compliance deadline for existing CISWIs of March 16, 2013 or three years after the 111(d) plan approval. Subpart 5, however, includes no such delay in its applicability. As currently drafted, subpart 5 could be read to impose the emissions standards for new CISWIs on existing CISWIs as soon as the MPCA adopts this proposed rule. Subpart 5 should therefore be amended to make clear existing CISWIs are not subject to subpart 5's requirements before the compliance deadline established under subpart 2.

Finally, Fibrominn understands that MPCA will consider all comments to Draft #2 but does not currently plan to provide responses to those comments. As the only facility in the state that will be subject to these new CISWI rules, according to the MPCA's materials, Fibrominn has a unique interest in these rules and a major stake in their final form. Thus, Fibrominn also respectfully requests responses to its comments, in whatever form the MPCA wishes to provide them.

Thank you again for this opportunity to provide feedback on the draft CISWI rules. Please contact me if you have any questions regarding Fibrominn's comments. If not, I look forward to hearing from the MPCA regarding Fibrominn's comments.

Respectfully submitted,

Bill Hefner, Outside Counsel for Fibrominn, LLC

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The Environmental Law Group is a member of the Environmental Law Network

GERDAU AMERISTEEL

Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, MN 55155-4194

Ref: Request for Informal Comments Pursuant to the July 31, 2012 Stakeholder Information Meeting on Preliminary Draft #2 of Mercury Air Emission Rule

August 24, 2012

Dear Mrs. Yolanda Letnes,

Thank you for allowing us the opportunity to provide our informal input as part of this rulemaking. We will submit formal comments at the appropriate stage of the formal rule-making process.

For the past few months, we've discussed with the MPCA staff the technical feasibility, cost-effectiveness, and other related issues that are associated with achieving the proposed mercury emissions limit of 35 mg/ton by 01/01/2018 for the Gerdau: St. Paul Mill facility.

Gerdau has been engaged in mercury reduction activities since the late 1990's and will continue to explore ways to reduce emissions from our facility. We support your initiative to minimize mercury impacts on the environment and commit to working with you in this endeavor.

We continue to believe that the "one-size-fits-all" approach currently envisaged (i.e., a 93% reduction of mercury emissions for each facility based on a baseline of 1990) is very difficult to achieve. This approach does not allow for a fair and proper consideration of many factors including but not limited to the recognition of historic mercury emissions reductions already achieved, technical feasibility associated with achieving the proposed limits and the cost-effectiveness issues.

We will continue to consult informally with the MPCA staff as the rule-making progresses and are hopeful that by the time the rule is ready for formal rule-making; our concerns would have been addressed.

If you have any questions, please call me at 651.731.5697.

Thank you,

Douglas Stolowski

Douglas Stolowski

Environmental Manager

St. Paul Mill
1678 Red Rock Road • St. Paul, MN 55119 • (651) 731-5600 • Fax: (651) 731-5699

From:	Chrissy L Bartovich
To:	Letnes, Yolanda (MPCA)
Cc:	Stephani Campbell; Teresa J Simetkosky
Subject:	Preliminary draft #2 of Mercury Air Emission Rule
Date:	Friday, August 24, 2012 3:10:33 PM

Yolanda,

U. S. Steel has the following comments to offer related to the second round preliminary draft of the Mercury Air Emission Rule.

7005 Subp 11f. The intent is not to define a source based upon particulate Hg, but that isn't clear in the definition.

Under 7019.3050 E:
(1) - The reference to MN Rule 7017.2060 (Methods 5 and 202) seems to be in error or otherwise is confusing. It is unclear if a test plan and following the entire protocol of the reference is required.
(4) - Identical is too restrictive. Substantially similar is more appropriate.
(5) - "Increasing capacity or changing fuel types" is too general as written. This could be construed to mean production ramping up after equipment has been idled for either a short or extended period. This also could mean short term switching from a solid fuel to gas. The language should be linked to increasing capacity or changing fuel types through a major Title V permit modification.

If you have any questions please let me know.

Thank you,

Chrissy Bartovich
Director - Environmental / Minnesota Ore Operations
United States Steel Corporation
T (218) 749-7364 | C (218) 780-9816 | E clbartovich@uss.com

August 24, 2012

VIA E-MAIL (yolanda.letnes@state.mn.us)

Ms. Yolanda Letnes
Minnesota Pollution Control Agency
520 Lafayette Road N
St. Paul, MN 55155

Re: Stakeholder Comments by ArcelorMittal Minorca on Minnesota Pollution Control Agency's Preliminary Draft #2 of the Mercury Air Emission Rule

Dear Ms. Letnes:

ArcelorMittal Minorca Mine Inc. ("ArcelorMittal") is submitting comments to the Minnesota Pollution Control Agency's ("MPCA's") Preliminary Draft #2 of the Mercury Air Emission Rule ("Preliminary Draft Rule") as requested during the July 31, 2012 meeting that we attended at MPCA. The Preliminary Draft Rule would require that the ArcelorMittal Minorca taconite production facility: (1) submit a mercury emission reduction plan; (2) achieve a mercury emission reduction of 72% from the 2010 baseline by 2025; and (3) monitor and report mercury emissions to demonstrate compliance. MPCA seeks a statewide annual air emission target of 789 pounds of mercury to be achieved from all sources by 2025 as described in the TMDL study and approved by U.S. EPA in March 2007. The Preliminary Draft Rule is intended to make the mercury reduction goals enforceable. MPCA has requested informal comments from stakeholders on the Preliminary Draft Rule by August 24, 2012.

ArcelorMittal Requests That MPCA Develop This Rule AFTER the Taconite Mercury Studies Are Complete in 2016. Until Then, We Cannot Properly Evaluate the Impact of This Rule or Fairly Comment on How It Should Be Revised.

ArcelorMittal respectfully suggests that a preliminary rulemaking for Mercury TMDL Implementation for Air Emission Sources is premature. The Taconite Processing Strategy in the Strategy Framework for Implementation of Minnesota's Statewide Mercury TMDL (July 7, 2008) states,

> [M]ercury reduction technology does not currently exist for use on taconite pellet furnaces. Therefore, achieving the 75% mercury reduction target will incorporate the concept of adaptive management by focusing on research to develop the technology in the near term and installation of mercury emission control

> equipment thereafter. The technology developed to achieve the target must be technically and economically feasible, it must not impair pellet quality, and it must not cause excessive corrosion to pellet furnaces and associated ducting and emission-control equipment.

Strategy Framework at p. 19. ArcelorMittal is working with other taconite mining companies to produce studies of potential mercury controls for the taconite industry jointly funded by agency and stakeholder contributions. The studies will continue over the next few years to determine if an emission control technology can meet the criteria set forth above and achieve the emission reduction goals for the ferrous processing industry in the TMDL and reflected in the preliminary draft rule. ADA Environmental Solutions delivered a final report this month (August 2012) based on short-duration screening tests of fixed-bed sorbent applications for controlling mercury at the ArcelorMittal Minorca furnace. As stated in the Executive Summary of the report:

> ADA does not recommend continued development and testing of fixed-bed technologies for mercury control from taconite plants. Based on results from Task 3, ADA recommends industry consideration of activated carbon injection as a lower cost option to apply AC to meet the industry mercury control goals.

ADA Final Report at 17 of 26. The next part of the study will engage in medium-duration testing to evaluate the feasibility of activated carbon injection ("ACI") applied to the Minorca furnace. If that goes well, the study will initiate long-duration testing to confirm that ACI meets the criteria in the Strategy Framework as applied to the Minorca facility. Until the studies' results are available, ArcelorMittal cannot critically evaluate whether the mercury emission target (28% of 2010 mercury emissions) in the preliminary draft rule is achievable by 2025 and we cannot propose a specific mercury reduction plan.

Fortunately, the 2025 schedule for implementation of the TMDL mercury emission reductions gives MPCA some additional time before it needs to start the rulemaking process for the taconite industry. ArcelorMittal asks that MPCA defer the rulemaking for the taconite industry until the long-duration testing is completed, or January 2016, whichever comes first, to ensure that stakeholders have the information we need to provide meaningful comments on the State's draft mercury rule.

ArcelorMittal Offers the Following Comments to Improve the Portions of the Preliminary Draft Rule Not Dependent upon a Final Control System Decision.

Chapter 7005, Definitions and Abbreviations:

Section 7005.01000, Subp 11e. The proposed definition of "Mercury" includes all inorganic and organic compounds of mercury, including elemental mercury. For our industry it is important to differentiate because the mercury compounds that are emitted from the furnaces and those that may be in ore. The focus of the Framework Strategy is to reduce emissions from taconite furnaces, not from iron ore material handling operations, because the mercury in the iron ore is not considered biologically available until it is heated in the furnace. The preliminary draft rule should differentiate and make clear that the mercury being regulated from the ferrous mining

industry sector is limited to the mercury emitted from taconite furnaces measured using standard USEPA test methods.

Section 7005.01000, Subp 11f. The definition of "Mercury emission source" should be revised to more clearly and consistently define the *de minimis* mercury emission source threshold. The preliminary draft rule sets 3.00 pounds of mercury per year as the threshold for regulating a stationary source. A higher *de minimis* threshold will decrease the cost and burden of implementing the rule without materially compromising the emission reduction goal. The threshold for a mercury emission source should be no less than the 5 lb/year threshold for a "minimally emitting unit" in 7011.0561 for coal-fired electric generating units. Also, the threshold should be applied to units, not to an entire facility. ArcelorMittal sees no reasoned justification for imposing a more stringent threshold on iron ore pellet production.

Five pounds per year may be too low to have the desired effect, which is to clear out the small sources for which the cost of compliance is not justified by the insignificant amount of emission reduction available. The regulatory threshold should be based on the level of emissions that cannot be cost-effectively reduced with commercially available control technologies. It may be premature to determine that threshold until we complete the current mercury control studies. If the rule proceeds before that information is available, ArcelorMittal asks that MPCA establish a cost-effectiveness threshold ($/lb of mercury reduced) that excuses a control technology from consideration in a mercury emission reduction plan.

The definition of "Mercury emission source" should also be clear about what is counted and not counted in the actual mercury emissions calculation. The rule excludes fugitive emissions, which ArcelorMittal supports. The definition should go further and count only the actual emissions from the emission units that are required to demonstrate a mercury emission reduction in a designated source category. For the "ferrous mining or processing" source category, the focus will properly be on the furnace when calculating actual mercury emissions. Other minor sources would be excluded from the mercury emission calculation.

ArcelorMittal supports the language in this section that allows a mercury emission source to demonstrate that its actual emissions have fallen below the regulatory threshold. However, it is unnecessary to require that the mercury emission source wait three years to be re-designated as a *de minimis* source. A single year of actual mercury emissions data should be sufficient to demonstrate that the stationary source is no longer a mercury emission source subject to this rule and that should continue as long as the actual emissions or potential to emit remain below the *de minimis* emission threshold.

Chapter 7007 Permits and Offsets

Section 7007.0502 "Mercury Emissions Reductions"

Section 7007.0502, Subpart 4(B) of the Preliminary Draft Rule states that "owners or operators of a mercury emission source that is a ferrous mining or processing facility must submit a [Mercury Emission Reduction Plan] by June 30, 2016." The Plan requires a "description of the specific control equipment, processes, materials or work practices" that will

be employed to reduce mercury emissions. See Section 7007.0502 Subpart 5.A.1. This information is anticipated only after the taconite industry cost-effectiveness studies are completed. The Plan submission deadline should allow enough time for the taconite mercury emission reduction studies to be completed and incorporated into planning for source-specific mercury reductions. The Mercury Emission Reduction Plans should be due no earlier than June 30, 2018. This still provides MPCA adequate time to approve the plan and still allow 5+ years for implementing the Mercury Emission Reduction Plan to meet the 2025 target for emission reductions from taconite mining.

In addition, Preliminary Draft Rule Section 7007.0502, Subpart 6(A)(1) states that "[t]he contents of the plan for the indurating furnace of a taconite iron ore processing facility or the rotary hearth furnace of a direct iron reduction facility shall demonstrate that by ***January 1, 2025*** mercury emissions are 28% of the number of pounds of mercury emitted in 2010." (Emphasis added.) This is inconsistent with Preliminary Draft Rule Section 7007.0502, Subpart 5, which requires a Mercury Emission Reduction Plan illustrating "[f]inal compliance with the mercury reductions ... no later than Dec. 31, 2025." ArcelorMittal suggests that all references to the compliance deadline use December 31, 2025 in the Preliminary Draft Rule.

Preliminary Draft Rule Section 7007.0502, Subpart 5(B) requires 90-day prior notice of schedule revisions in the Plan. It is unreasonable to expect that all reasons that may justify a schedule revision are going to arise more than 90 days before a deadline. ArcelorMittal asks that MPCA include a provision that reserves its authority to approve any schedule changes properly justified.

Preliminary Draft Rule Section 7007.0502, Subpart 5(C) allows for owners or operators to make a written request for an exemption to the applicable mercury control and work place requirements if these requirements are not achievable. This request must be made "at least 365 days prior to the submittal date [of the Mercury Emission Reduction Plan]" and the owner or operator seeking an exemption "must submit an alternative plan to reduce mercury emissions" by June 30, 2016, in the case of ferrous mining or processing facilities. ArcelorMittal supports this provision but suggests that the deadline for alternative plans also be revised to June 30, 2018, for the reasons set forth above. It is unreasonable to expect that all reasons that may justify an alternative plan for mercury emission reduction will be available one year before a Plan is otherwise due. There is adequate time in the schedule to address alternative plans submitted when Mercury Emission Reduction Plans are otherwise due. ArcelorMittal also suggests that the Agency not publicly notice requested exemptions or alternate plans, which would considerably slow the pace of implementation of a mercury emission reduction plan. If necessary, alternatives can be incorporated into Title V permits and open to public comment at that time.

Clarification of the Definition of "Common Control and Ownership"

ArcelorMittal would suggest a slight modification to Section 7007.0502, Subpart 6(A)(2), which currently states: "The plan may accomplish reductions as ... c. 28% of 2010 emissions across all furnaces at multiple stationary sources when all stationary sources are under common control and ownership." This appropriately extends averaging to sources with separate operating permits. ArcelorMittal encourages MPCA to eliminate the unnecessary complication that

sources participating in averaging must be under "common control and ownership." The Hibbing Taconite facility has shared ownership interests under one entity's control. It is not clear whether Hibbing could be eligible for averaging as this provision has been drafted. That could not have been MPCA's intent. Multiple sources can effectively average through enforceable operating permit terms without being commonly owned or controlled. ArcelorMittal recommends that MPCA amend the above-quoted section to allow for increased averaging flexibility across multiple facilities:

> c. 28% of 2010 emissions across all furnaces at multiple stationary sources when their respective operating permits render the emission reductions enforceable.

Evaluation of Continuous Emission Monitoring Systems

Section 7007.0502, Subpart 6(A)(3) requires an "evaluation" of Continuous Emission Monitoring Systems ("CEMS"). The lime kilns, iron and steel melters, and "mercury sources not otherwise identified" are not required to evaluate the need for CEMS. ArcelorMittal is not aware of any application of mercury CEMs in the taconite industry and the harsh conditions make sustaining a CEM system to measure very small mercury concentrations unworkable. The CEMs evaluation should not be required for the taconite industry.

Suggested Modifications to the Preliminary Draft Rule's Mercury Emission Reduction Plan Compliance Requirements

Preliminary Draft Rule Section 7007.0502, Subpart 7 states that "[t]he Commissioner can modify the Plan if the Agency determines that the proposed Plan would not achieve reasonable progress by the mercury emission source toward the statewide mercury air emission reduction target." ArcelorMittal objects to unilateral MPCA action to modify the Plan without consultation with the affected source. The rule language should be modified to allow a more collaborative revision to Mercury Emission Reduction Plans. ArcelorMittal would propose the following language for this Subpart:

> Subp. 7. **Compliance with Plans**
>
> A. The Commissioner will review and approve Plans within 180 days after submission.
>
> B. Prior to approval of the Plan, the Commissioner may propose modifications to the Plan if the Agency determines that the proposed Plan would not achieve reasonable progress by the mercury emission source toward the statewide mercury air emission reduction target. The owners or operators shall submit a revised Plan in response to the Commissioner's proposed modifications to the Plan.
>
> C. The Plan may be amended by the owners or operators with the Commissioner's approval.

D. The owners or operators of the mercury emission source will operate in compliance at all times with the approved Plan.

E. If the Commissioner determines the owners or operators are out of compliance with the Plan, then the owners or operators may be required to amend the Plan.

F. The Commissioner will propose a schedule of compliance and mercury reduction within 180 days of the submittal date if the owners or operators of a mercury emission source fail to submit a Plan by the date specified in subp. 4.

These revisions promote a collaborative approach to Plan modifications prior to approval.

Suggested Modifications to the Preliminary Draft Rule's Performance Test Data Provisions for Mercury Emission Sources

MPCA staff seeks comments regarding "Testing Requirements" under Section 7019.3050, Subpart E. Since mercury emissions can be quantified in a variety of effective ways, ArcelorMittal recommends that the Plan include a proposed testing protocol for each emission unit with actual mercury emissions of five pounds or more in the most recent calendar year. MPCA should encourage the use of test data from similar sources and from representative stacks to characterize source emissions. The site-specific test protocol allows for maximum flexibility in developing an appropriate testing regime. This will significantly reduce the cost burden for testing indurating furnaces without compromising accuracy and reliability. New or modified sources should be required to submit a test protocol within 120 days with a schedule to quantify mercury emissions within the first year of operation after the new or modified source installation. The rule should add a test protocol component to the Plan submission requirements and remove or significantly streamline Subpart E of section 7019.3050.

ArcelorMittal supports the mercury material balance set forth at Section 7019.3065 as one option for quantifying mercury emissions. Any source with reliable inputs for a mercury material balance should not be required to install and maintain a continuous emission monitor for mercury.

Alternative Methods

ArcelorMittal appreciates the opportunity to submit these preliminary comments. We encourage MPCA to consider implementation options that maximize operational flexibility and minimize cost while pursuing the TMDL for mercury air emission sources by 2025. This may include allowance allocations, sector-wide averaging, and mercury reduction offsets. Each of these options requires careful consideration in light of mercury emission reduction options. ArcelorMittal encourages MPCA to defer this rulemaking while the taconite mercury emission studies are underway but continue to consider alternative approaches to cost-effectively achieve the mercury air emission TMDL goal of no more than 789 pounds of mercury emitted per year by 2025.

Sincerely,

Richard M. Zavoda

Richard M. Zavoda

cc: Jaime L. Baggenstoss
Keith A. Nagel
Douglas A. McWilliams, Esq.

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August 24, 2012

Ms. Yolanda Letnes
Minnesota Pollution Control Agency
520 Lafayette Road North
St. Paul, Minnesota 55155-4194

Re: Comments On Preliminary Draft #2 Of Mercury Air Emission Rule

Dear Ms Letnes:

Cliffs Natural Resources (Cliffs) is the owner or partial owner and operator of the Hibbing Taconite, Northshore, and United Taconite iron mines and associated iron ore processing facilities in Northeastern Minnesota. The source of mercury emissions at the mines is mercury that is liberated from the ore during ore processing in amounts directly proportional to the mercury content of the ore and the quantity of ore processed. Cliffs was an active participant in the development of the Mercury TMDL Implementation Plan and the mercury emission reduction target that was determined by the taconite mining sector. For these reasons Cliffs has a vested interest in the Mercury Air Emission Rule and is please to offer the following comments on the Preliminary Draft #2 Rule.

CHAPTER 7005.0100 DEFINITIONS

Subp. 11e. Mercury

The proposed definition includes all inorganic and organic airborne compounds of mercury, including elemental mercury. It is Cliffs' understanding that the intent of the rule is to measure emissions of mercury from the taconite sector that result from heating the ore and burning fuels. However, as currently written it would include mercury contained in particulate emissions from ore crushing and handling at ambient temperatures **including fugitive dust emissions**. This mercury is not biologically available and Cliffs does not believe it was intended to be included in the mercury emissions inventory. Therefore, Cliffs recommends the definition of "Mercury" be written to specifically exclude mercury contained in particulate emissions at ambient temperatures.

Subp.11f. Mercury Emission Source

Cliffs appreciates the clarification that mercury emissions sources do not include fugitive emissions.

The proposed definition pertains to stationary sources with actual mercury emissions of 3.00 pounds per year or more, after controls. Up to this point in time, the 3.00 pounds permit year threshold applied to only increases of mercury emissions from new or expanding sources.

Existing MN Rule 7005.0100, Subp. 42c defines a stationary source as an assemblage of all emissions units and emission facilities that belong to the same industrial grouping, are located at one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). In the case of a taconite plant, proposed definition Subp. 11f encompasses all furnaces collectively within the taconite processing plant. However, the 3.00 pound per year threshold is in direct conflict with the Taconite Processing Sector Implementation Plan Strategy with regard to Northshore Mining Company (Northshore).

During the numerous stakeholder meetings that culminated in development of the Taconite Processing Mercury Reduction Strategy among others, the low mercury emissions from Northshore were discussed. The low emissions are due to the low mercury content of the ore and the natural gas fuel used in the furnaces. Northshore operates four furnaces: two large furnaces each producing approximately 4 million long tons of pellets per year (MLTPY) and two small furnaces each producing approximately 2 MLTPY. Mercury emissions from each of the four furnaces, in rounded numbers, are as follows:

Furnace 11	2.43 lbs/year mercury
Furnace 12	2.44 lbs/year mercury
Furnace 5	1.21 lbs/year mercury
Furnace 6	1.22 lbs/year mercury
TOTAL	**7.3 lbs/year** mercury-MN Mercury Emissions Inventory-April 18, 2008

While total plant emissions are 7.3 lbs/year, each furnace is operated independently of the other furnaces, and any effort to reduce mercury emissions would require installation of mercury emission controls on one or more of the furnaces. There was general agreement that it would be technically and economically infeasible to reduce these emissions further. To this end, the Taconite Processing Mercury Reduction Strategy lists 14 applicable furnaces (number of furnaces in parentheses) at U.S Steel Keewatin Taconite (2), Hibbing Taconite (3), U.S. Steel Minntac (5), United Taconite (2), ArcelorMittal Minorca Mine (1), and ESSAR (1) plus one new technology furnace at Mesabi Nuggets to which the Strategy applies. Northshore's four furnaces are not included. Because of this, no mercury emission reduction technology is being tested at Northshore as part of the mercury reduction research that the taconite industry is conducting in conjunction

with the MDNR and MPCA. To now contradict the MPCA accepted and approved Taconite Processing Strategy through rulemaking is simply unacceptable.

CHAPTER 7007, PERMITS AND OFFSETS

Subp. 5. Mercury Emissions Reduction Plan Elements and Format

Section A(4) would require each taconite plant to commit to a mercury control efficiency or emission rate the "will" be achieved when the emission reduction plan is fully implemented. This will not be possible for the taconite plants by mid 2016 when the plans will be submitted for the following reasons:

- The Taconite Processing Strategy clearly states, "mercury reduction technology does not currently exist for use on taconite pellet furnaces. Therefore, achieving the 75% mercury reduction target will incorporate the concept of adaptive management by focusing on research to develop the technology in the near term and installation of mercury emission control equipment thereafter."

- Research is proceeding on finding one or more mercury reduction technologies that will achieve the ultimate target of a 75% reduction of mercury emissions by 2025. However, as clearly stated during the stakeholder meetings, two types of furnaces are used in the industry that function very differently and even among furnaces of the same type, there are differences in furnace size, design configurations, air flow through the furnace, fuels used, flux materials added to the pellets, and the wet scrubbers used. Therefore, once mercury control devises are installed, the ultimate mercury reduction achieved will be influenced by all of these factors. Only after the control technology is fully commissioned and optimized will the true mercury reduction be known.

For similar but other reasons, it may not be possible for many or any mercury emission source to state the mercury control efficiency or emission rate that will be achieved when individual plans are fully implemented. The MPCA is urged to reconsider the need for this commitment in the plans and the consequences if many of the sources do not ultimately achieve the stated mercury reduction.

Section C states, "If the mercury control and work practice requirements listed in subpart 6 are not achievable, the owners or operators must make a written request to the Commissioner for an exemption from the requirements. This request must be submitted at least 365 days prior to the submittal date in subpart 4." Because subpart 4 requires submission of a plan by June 30, 2016, an exemption request would have to be submitted prior to June 30, 2015. Yet in accordance with the Taconite Processing Mercury Reduction Strategy, testing of the first technology installations on one straight-grate furnace and one grate-kiln furnace will still be in progress and testing would continue into late 2015 or possibly early 2016.

Therefore, it would be impossible for management at a taconite plant to even determine the need for an exemption by June 30, 2015. These dates must be revised to recognize the state of the developing mercury control technology for the taconite industry.

The MPCA requested comments on whether or not modifications to a plan should be subject to public comment. Cliffs strongly advises against subjecting plan modifications to public comments. The technology development is proceeding through research, and flexibility is needed to adjust plans based on research results. Approval of plan modifications should proceed administratively with the MPCA to avoid the delays that will result from the public comment scenario. If every plan modification must be subjected to public comment, the process may inhibit the industry's ability to meet the 2025 deadline for implementing installation of mercury emission controls.

Subp. 6. Mercury Control And Work Practices

The Taconite Processing Mercury Reduction Strategy very clearly states that the mercury to be achieved is a **Target** that "will incorporate the concept of adaptive management by focusing on research to develop the technology in the near term and installation of mercury emission control equipment thereafter. The technology developed to achieve the target must be technically and economically feasible, it must not impair pellet quality, and it must not cause excessive corrosion to pellet furnaces and associated ducting and emission control equipment." This concept, which is fundamental to the viability of the taconite industry, is not even acknowledged in the Draft #2 Rule. Cliffs believes the TMDL Implementation Plan will continue to exist in parallel to the final Mercury Rule. Therefore, this concept must be added to the Ferrous Mining or Processing section of the rule to ensure consistency between the two documents.

Section A.2: Cliffs appreciates the MPCA's well founded effort to provide options through subsections a, b, and c for the industry to accomplish mercury emission reductions in conformance with the plan. However, the Taconite Processing Mercury Reduction Strategy clearly states that the target emission reduction will be achieved **"from all plants collectively"**. As previously stated in these comments, significant differences exist between plants and furnaces and even among furnaces of the same type. The research conducted to date indicates that while a tested technology achieved significant emission reductions at one plant, far less success was achieved on the same type of furnace at another plant. The reasons for this are not understood. It is imperative that the final rule recognize this issue and the language of the Strategy that the ultimate emission reductions will be based on all taconite plants collectively.

Section A.2.c: *28% of 2010 emissions across all furnaces at multiple stationary sources when all stationary sources are under common control or ownership.* As previously noted in these comments, a stationary source by regulatory definition

is an assemblage of all emissions units and emission facilities that belong to the same industrial grouping, are located at one or more contiguous or adjacent properties, and are under the control of the same person (or persons under common control). Because the regulatory definition stipulates that an assemblage of emission units must be located at one or more contiguous or adjacent properties, Cliffs questions the viability of this option of grouping sources that are not on adjacent or contiguous properties. In addition to being on contiguous or adjacent properties, the definition states that the units must also be under the control of the same person. Cliffs owns the Northshore and United Taconite Mines but is a partial owner of the Hibbing Taconite Mine. Further, each mine is a separate corporation, which may conflict with the concept of being under control of the same person. Further investigation of these aspects will be required to ensure this option is, in fact, viable.

Section D. Mercury Emission Sources not otherwise identified. The last line of this section uses the term "lowest achievable mercury emission rate". Under the Clean Air Act New Source Review regulations, lowest achievable emission rate (LAER) is applicable to projects in areas that in nonattainment with ambient air quality standards. Cliffs questions the wisdom of applying the concept of LAER to the Mercury Rule. A different term is highly recommended for this section.

Subp. 7. Compliance with Plans

Section B states that the Commissioner can modify a plan at his discretion if a determination is made that reasonable progress is not being made. Cliffs objects to this option based on the fact that the taconite industry is striving to develop technology to reduce its mercury emissions. If the industry's best effort to achieve the target reduction is not possible due to technical and/or economic constraints, it is inappropriate for a possible plan modification that would jeopardize the viability of the taconite industry. Further consideration of this option for the Commissioner is warranted.

Cliffs appreciates the opportunity to provide these comments and looks forward to further dialogue with the MPCA. Should you have any questions about the comments, please contact me at 218-279-6128 or at david.skolasinski@cliffsnr.com.

Sincerely,

David Z. Skolasinski

David Z. Skolasinski
District Manager – Environmental & Regulatory Planning/Analysis

MERCURY
TECHNOLOGIES OF MINNESOTA, INC.

September 26, 2012

Ms. Barbara Jean Conti
Metro District Office
Environmental Analysis & Outcomes
Minnesota Pollution Control Agency
520 Lafayette Road
St. Paul, Minnesota 55155-4194

RE: Draft Rule on Mercury TMDL Implementation for Air Emissions Sources

Dear Ms. Conti:

Mercury Technologies of Minnesota (MTM) has the following two comments regarding the draft Mercury TMDL rule:

1. Regarding air monitoring equipment for mercury lamp recycling facilities addressed in Part 7011.4030, Subp. 1. D.2., the industry standard for over 20 years has been use of Arizona Industry's Jerome Meter. MTM requests that we be able to continue to use the Jerome Meter for air monitoring. Other options are simply too expensive for an operation of our size. We send our Jerome Meter for annual calibration to Arizona Instruments, which is an ISO 9001 company. All calibration testing standards are NIST traceable. The Jerome Meter has resolution numbers on screen, which allows ease of use of the equipment. The accuracy of the Jerome is widely recognized. We can provide additional details if needed. We also believe that a requirement for monitoring equipment that functions in detection ranges below micrograms per cubic meter is excessive, given the proposed three pound per year standard in the draft rule.

2. We would also advocate that the rule require, at a minimum, the following Best Management Practices at recycling facilities: records of all air monitoring results; maintenance logs on all facility lamp processing equipment; and logs for all equipment issues and how such issues were resolved. Also, Best Management Practices for housekeeping, storage, and processing should be in writing and kept at the facility.

Thank you for your attention to these matters.

Sincerely,

Kelly Gribauval-Hite
Chief Executive Officer

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