

**Wisconsin Department of Natural Resources
Natural Resources Board Agenda Item**

SUBJECT:

Request adoption of Board Order AM-31-19, proposed rules affecting chapter NR 438, Wis. Adm. Code, related to clarifying and updating air contaminant emissions inventory reporting requirements

FOR: January 2022 Board meeting

PRESENTER'S NAME AND TITLE: Gail Good, Air Management Program Director

SUMMARY:

In 2015 the U.S. Environmental Protection Agency (EPA) finalized amendments to the Air Emissions Reporting Requirements (AERR) rule. This rule updated requirements for state and local agencies to collect and submit emissions data to the EPA. Currently, some inconsistencies exist between Wisconsin's air emissions reporting requirements codified in ch. NR 438, Wis. Adm. Code, and the AERR rule. The Department of Natural Resources (the department) is proposing to revise ch. NR 438, Wis. Adm. Code, to meet federal requirements in the AERR rule. The proposed changes will ensure the state has a legally sufficient state implementation plan (SIP), required under the federal Clean Air Act (CAA).

The department is proposing to require sources to report emissions of primary particulate matter with a diameter of equal to or less than 2.5 µm (PM2.5). Additionally, certain large sources of air pollution will be required to report annual emissions of all criteria air pollutants and ammonia. The proposed rule also includes a list of emission units, operations, or activities that a facility may exclude from the annual emission inventory. Other proposed changes will align language in ch. NR 438, Wis. Adm. Code, with federal emissions reporting terminology and ensure that the rule reflects the department's current emissions inventory process. The proposed rule will not have an economic impact on small businesses.

The Board last acted on this rule on October 28, 2020, when it approved the scope statement and conditionally approved the public hearing notice and notice of submittal of proposed rules to the Legislative Council Rules Clearinghouse. The department has completed the external review process for Board Order AM-31-19, which includes holding a public hearing and review by the Legislative Council Rules Clearinghouse. Comments received have been considered in the draft final rule. If the final rule language of AM-31-19 is approved, the rule will be submitted to the Governor and, if the Governor approves, to the legislature for review and approval. The 30-month time frame for submission of a final rule to the legislature for approval expires on February 24, 2023.

RECOMMENDATION: That the Board adopt Board Order AM-31-19.

LIST OF ATTACHED MATERIALS (check all that are applicable):

- | | |
|---|---|
| <input checked="" type="checkbox"/> Background Memo | <input type="checkbox"/> Attachments to background memo |
| <input checked="" type="checkbox"/> Fiscal estimate and economic impact analysis (EIA) form | <input checked="" type="checkbox"/> Board order/rule |
| <input checked="" type="checkbox"/> Response summary | <input type="checkbox"/> (insert document name) |

Approved by	Signature	Date
Gail E. Good, Air Management Program Director	<small>DocuSigned by:</small> <i>Gail E. Good</i>	12/14/2021 9:53 AM CST
Darsi J. Foss, Environmental Management Division Administrator	<small>DocuSigned by:</small> <i>Darsi J. Foss</i>	12/14/2021 1:19 PM CST
for Preston D. Cole, Secretary	<small>DocuSigned by:</small> <i>Todd Ambs</i>	12/15/2021 10:03 AM CST

cc: Board Liaison - AD/8

DS
WR

Program attorney – LS/8

by Todd Ambs

Department rule officer – LS/8

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CORRESPONDENCE/MEMORANDUM

DATE: December 13, 2021

TO: All Members of the Natural Resources Board

FROM: Preston D. Cole, Secretary

SUBJECT: Background memo on Board Order AM-31-19, relating to revisions to ch. NR 438, Wis. Adm. Code, to clarify and update air contaminant emissions inventory reporting requirements

1. Subject of Proposed Rule:

Revisions to ch. NR 438, Wis. Adm. Code, to clarify and update air contaminant emissions inventory reporting requirements.

2. Background:

In 2015 the U.S. Environmental Protection Agency (EPA) finalized amendments to the Air Emissions Reporting Requirements (AERR) rule (40 CFR 51, subpart A, and 40 CFR 51.122). This rule updated requirements for state and local agencies to collect and submit emissions data to the EPA. Currently, some inconsistencies exist between Wisconsin's air emissions reporting requirements codified in ch. NR 438, Wis. Adm. Code, and the federal AERR rule. The Department of Natural Resources (the department) is proposing to revise ch. NR 438, Wis. Adm. Code, to meet federal requirements in the AERR rule.

3. Why is the rule being proposed?

Updating ch. NR 438, Wis. Adm. Code, to address inconsistencies between the federal AERR rule and Wisconsin's air contaminant emissions reporting requirements will ensure the state has a legally sufficient state implementation plan (SIP), as required by § 110(a)(2) of the Clean Air Act (CAA). The department submitted two SIP revisions required by the CAA in 2015 and 2018 that EPA will not fully approve until the AERR rule inconsistencies are addressed through revisions to Wisconsin's administrative code.

4. Summary of the rule.

To address inconsistencies in air contaminant emissions reporting requirements between the federal AERR rule and ch. NR 438, Wis. Adm. Code, the department is proposing to make the following revisions to ch. NR 438, Wis. Adm. Code:

- Incorporate an emissions reporting requirement for sources that directly emit particulate matter with an aerodynamic diameter equal to or less than 2.5 μm , or $\text{PM}_{2.5}$.
- Clarify that reporting requirements for particulates apply to primary emissions, where primary emissions are directly emitted to the atmosphere, rather than secondary particulates formed through atmospheric chemical reactions.
- Clarify that the filterable and condensable components of primary particulates are reported.
- Require major sources in nonattainment areas, sources with the potential to emit equal to or greater than 100 tons per year of criteria air pollutants or ammonia, and sources with actual emissions of 0.5 ton per year of lead to report annual emissions of all criteria air pollutants and ammonia.

Additionally, the department is proposing to make the following revisions to clarify and modernize ch. NR 438, Wis. Adm. Code:

- Align state code language with federal emissions reporting terminology.

- Revise outdated ch. NR 438, Wis. Adm. Code, language to reflect the department's current emissions inventory reporting process.
- Create a list of emission units, operations, or activities that a facility may exclude from the annual emission inventory.

The proposed rule will result in a small administrative impact to applicable sources in the form of time required to report and certify annual emissions. To minimize administrative time associated with annual emissions reporting, the department's web-based air emissions inventory reporting program provides information and an emissions calculator, which the owner or operator of a facility can use to estimate emissions. The program currently includes emission factors for sources to calculate their filterable and condensable particulate emissions. The department expects the proposed changes will improve the clarity of Wisconsin's emissions reporting requirements by synchronizing the emissions reporting language between ch. NR 438, Wis. Adm. Code, the department's web-based air emissions inventory reporting program, and the federal AERR rule.

5. How does this proposal affect existing policy?

Most of the proposed revisions will not impact existing department policy. The proposed rule language aligns ch. NR 438, Wis. Adm. Code, with the federal AERR rule and the department's current emissions reporting process.

The department also proposes to exclude some units, operations, or activities from the reporting requirement if certain conditions are met. This policy change will streamline reporting requirements.

6. Has Board dealt with these issues before?

Yes. The Board approved the scope statement and conditionally authorized hearings for AM-31-19 at its October 2020 meeting.

7. Who will be impacted by the proposed rule? How?

Consistent with federal AERR rule, revisions to ch. NR 438, Wis. Adm. Code, will affect the following sources:

- Sources will be required to report annual emissions of particulate matter with an aerodynamic diameter of equal to or less than 2.5 μm (PM_{2.5}) if they meet the PM_{2.5} emission reporting threshold.
- Major sources in nonattainment areas, sources with the potential to emit equal to or greater than 100 tons per year of criteria air pollutants or ammonia, and sources with actual emissions of 0.5 ton per year of lead will be required to report annual emissions of all criteria air pollutants and ammonia regardless of emissions amount.

8. Soliciting public input on economic impact synopsis

The department contacted the following entities during the economic impact analysis comment period via email: 314 potentially affected sources as determined via an analysis of existing emissions reporting information, the Small Business Environmental Council, Wisconsin Manufacturers and Commerce, and the American Council of Engineering Companies of Wisconsin. In addition, the department contacted members of the Air Management Study Group, the Air Program's stakeholder working group. This group includes members representing Clean Wisconsin, environmental law attorneys, electric utilities and representatives of large and small industrial businesses.

This rule does not impact local government units directly. However, the department notified the League of Wisconsin Municipalities and the Wisconsin Counties Association so that local governments were aware of this rulemaking action.

9. Small Business Analysis

The proposed rule will not have an economic or fiscal impact on small businesses. The proposed changes will not involve an emission fee increase for sources and will not require sources to install new emissions monitoring equipment or reporting systems. If the proposed PM_{2.5} emissions reporting requirement is applicable to a small business, there could be a small administrative impact in the form of time required to report and certify annual PM_{2.5} emissions.

Drafter: Olivia Salmon

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Comments and DNR Responses Natural Resources Board Order AM-31-19

December 10, 2021

This document presents a summary of public comments received on proposed rules affecting chapters NR 400, 438, and 484, Wis. Adm. Code, related to clarifying and updating air contaminant emissions inventory reporting requirements.

OVERVIEW

In 2015 the U.S. Environmental Protection Agency (EPA) finalized amendments to the Air Emissions Reporting Requirements (AERR) rule (40 CFR 51, subpart A, and 40 CFR 51.122). This rule updated requirements for state and local agencies to collect and submit emissions data to the EPA. Currently, some inconsistencies exist between Wisconsin's air emissions reporting requirements codified in ch. NR 438, Wis. Adm. Code, and the federal AERR rule. The Department of Natural Resources (the department) is proposing to revise ch. NR 438, Wis. Adm. Code, to meet federal requirements in the AERR rule. Updating ch. NR 438, Wis. Adm. Code, will ensure the state has a legally sufficient state implementation plan (SIP), required under § 110(a)(2) of the federal Clean Air Act.

ECONOMIC IMPACT ANALYSIS (EIA)

A public comment period on the draft EIA occurred from June 30 to July 14, 2021. The department received comments on the EIA from two organizations, Wisconsin Manufacturers & Commerce (WMC) and the WEC Energy Group. The department provided responses to both organizations regarding their EIA comments.

EIA Comment from WMC

WMC commented on the administrative efforts that would be required to comply with a proposed recordkeeping requirement in s. NR 438.03(4), Wis. Adm. Code, relating to the type of records that would need to be kept. WMC recommended that “and” in the proposed requirement for sources to maintain safety data sheets, technical data sheets, **and** [emphasis added] lab testing results be replaced with “or”, to lower administrative recordkeeping costs.

Response

The department revised the proposed recordkeeping requirements in s. NR 438.03(4), Wis. Adm. Code, to address the change requested by WMC. The department completely removed the requirement to specifically maintain safety data sheets, technical data sheets, and lab testing results, and expanded the proposed rule language to more broadly allow sources to maintain any record that identifies the **composition and** [emphasis added to new addition] quantities of raw materials and incinerated waste that result in air emissions. The department expects these changes will reduce the administrative effort needed to comply with the proposed rule.

EIA Comment from WEC Energy Group

The WEC Energy Group commented that the department had not adequately calculated the cost that would be incurred by sources as a result of the proposed rule to report annual emissions from certain emissions units, operations and activities exempt from inclusion in operation permit applications under s. NR 407.05(4)(c)10., Wis. Adm. Code.

Response

Section NR 438.03(1)(am)3., Wis. Adm. Code, was added to the proposed rule to exclude emissions from listed emissions units, operations, or activities from the annual emissions inventory. While this list bears resemblance to the list of insignificant emissions units exempt from inclusion in operation permit applications under s. NR 407.05(4)(c)9., Wis. Adm. Code, the proposed addition to s. NR 438.03(1)(am)3. is rooted in different authority (specifically, s. 299.15, Wis. Stats.). As such, the department did not revise the board order or economic impact analysis based on WEC Energy Group's comments because the proposed rule will not result in new reporting requirements for the aforementioned units. Additionally, new exclusion language added to the proposed rule in response to comments received during the public comment period, would result in all emissions units, operations, and activities excluded under s. NR 407.05(4)(c), Wis. Adm. Code, to be excluded from emissions reporting requirements under s. NR 438.03, Wis. Adm. Code. Thus, sources using these exclusions would see a reduction in cost incurred when reporting annual emissions under the proposed rule.

PUBLIC COMMENTS ON DRAFT RULE

The public comment period for the proposed rule occurred from September 27 to November 5, 2021. The public hearing was held on October 29, 2021. Five members of the public attended the hearing. None of the attendees provided verbal comments and none of the attendees registered in support or in opposition of the proposed rule. Written comments were received from the Wisconsin Utility Association (WUA), the Wisconsin Paper Council (WPC), and WMC during the public comment period. Additionally, EPA provided two comments on the rule language posted for public comment.

Comments from the WUA, WPC, and WMC

WUA, WPC, and WMC recommended that the department expand its proposed exemptions list in ch. NR 438, Wis. Adm. Code, to include any emission source, operation, or activity previously identified by the department to be an insignificant source in, or otherwise exempt from, department-issued operation and construction permits. WPC also recommended the inclusion of a "catch-all" provision that would allow an owner or operator of a facility to submit emissions from emissions units, operations, or activities that could be excluded from emissions inventory requirements upon approval of the department.

Response

In response to the public comments received, the department contacted WPC, WUA, and WMC individually to better understand the intent of their recommendations. Following these discussions, the department added another emissions reporting exclusion to the initially proposed exclusion list. The new exclusion, added under s. NR 438.03(1)(am)4., Wis. Adm. Code, covers emissions units, operations, and activities that meet the operation permit application exemption criteria in s. NR 407.05(4)(c)9.a., Wis. Adm. Code. This new exclusion addresses the three organizations' common concern regarding potential confusion about reporting emissions from units identified as insignificant in department-issued operation and construction permits but not in the ch. NR 438, Wis. Adm. Code exclusion list. The new exclusion language was also crafted to serve as the catch-all provision requested by WPC. The department would still maintain final review of excluded emissions under this catch-all provision. The department expects this exclusion added to address public comments will reduce the administrative emissions reporting burden for facilities.

Comments from EPA

EPA commented that while the proposed applicability thresholds in s. NR 438.03(1)(af), Wis. Adm. Code, aligned with *annual* reporting requirements in 40 CFR 51.30, the department should incorporate the lower applicability thresholds associated with *triennial* years.

Response

The department revised s. NR 438.03(1)(af), Wis. Adm. Code, to include applicability thresholds associated with triennial inventory years.

Proposed emission inventory requirements for emissions-discharging units in s. NR 438.04(5), Wis. Adm. Code, should account for fugitive releases.

Response

The department revised s. NR 438.04(5), Wis. Adm. Code, to require emissions information from fugitive releases.

LEGISLATIVE COUNCIL RULES CLEARINGHOUSE

The Legislative Council Rules Clearinghouse submitted comments on statutory authority; form, style and placement in administrative code; and clarity, grammar, punctuation and use of plain language. Changes to the proposed rule were made to address all recommendations by the Legislative Council Rules Clearinghouse, except for the comment discussed below.

Comment 5.e. recommended that the single use of “emissions inventory” in s. NR 438.03(6), Wis. Adm. Code, be modified to “emissions inventory summary report” for consistency within the subsection. A source’s emissions inventory and emissions inventory summary report are distinct documents, and emissions inventory is intentionally used. The department included additional rule language to provide clarity in this subsection.

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STATE OF WISCONSIN
DEPARTMENT OF ADMINISTRATION
DOA-2049 (R09/2016)

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ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

<p>1. Type of Estimate and Analysis <input type="checkbox"/> Original <input checked="" type="checkbox"/> Updated <input type="checkbox"/> Corrected</p>	<p>2. Date 12/10/21</p>
<p>3. Administrative Rule Chapter, Title and Number (and Clearinghouse Number if applicable) NR 400 – Air Pollution Control Definitions NR 438 – Air Contaminant Emission Inventory Reporting Requirements NR 484 – Incorporation By Reference (CR 21-072)</p>	
<p>4. Subject Revisions to ch. NR 438 to clarify and update air contaminant emissions inventory reporting requirements (Board Order AM-31-19).</p>	
<p>5. Fund Sources Affected <input type="checkbox"/> GPR <input type="checkbox"/> FED <input checked="" type="checkbox"/> PRO <input type="checkbox"/> PRS <input checked="" type="checkbox"/> SEG <input type="checkbox"/> SEG-S</p>	<p>6. Chapter 20, Stats. Appropriations Affected 20.370(4)(cm), 20.370(4)(co), 20.370(4)(mq)</p>
<p>7. Fiscal Effect of Implementing the Rule <input checked="" type="checkbox"/> No Fiscal Effect <input type="checkbox"/> Increase Existing Revenues <input type="checkbox"/> Increase Costs <input type="checkbox"/> Decrease Costs <input type="checkbox"/> Indeterminate <input type="checkbox"/> Decrease Existing Revenues <input type="checkbox"/> Could Absorb Within Agency's Budget</p>	
<p>8. The Rule Will Impact the Following (Check All That Apply) <input type="checkbox"/> State's Economy <input checked="" type="checkbox"/> Specific Businesses/Sectors <input type="checkbox"/> Local Government Units <input type="checkbox"/> Public Utility Rate Payers <input checked="" type="checkbox"/> Small Businesses (if checked, complete Attachment A)</p>	
<p>9. Estimate of Implementation and Compliance to Businesses, Local Governmental Units and Individuals, per s. 227.137(3)(b)(1). \$0 – 50,000 (minimal)</p>	
<p>10. Would Implementation and Compliance Costs Businesses, Local Governmental Units and Individuals Be \$10 Million or more Over Any 2-year Period, per s. 227.137(3)(b)(2)? <input type="checkbox"/> Yes <input checked="" type="checkbox"/> No</p>	
<p>11. Policy Problem Addressed by the Rule In 2015 the U.S. Environmental Protection Agency (EPA) finalized amendments to the Air Emissions Reporting Requirements (AERR) rule (40 CFR 51, subpart A, and 40 CFR 51.122). This rule updated requirements for state and local agencies to collect and submit emissions data to the EPA. Currently, some inconsistencies exist between Wisconsin's air emissions reporting requirements codified in ch. NR 438, Wis. Adm. Code, and the AERR rule. The Department of Natural Resources (the department) is proposing to revise ch. NR 438, Wis. Adm. Code, to meet federal requirements in the AERR rule. Updating ch. NR 438, Wis. Adm. Code, will ensure the state has a legally sufficient state implementation plan (SIP), required under Section 110(a)(2) of the federal Clean Air Act (CAA).</p> <p>The department is proposing to add an emissions reporting requirement for sources that directly emit particulate matter with an aerodynamic diameter of equal to or less than 2.5 µm (PM_{2.5}), which ensures compliance with the AERR rule and maintains an approvable SIP. Related changes include specifying that state reporting requirements for particulate matter apply to primary emissions, where primary emissions are directly emitted to the atmosphere, rather than particulate matter formed through atmospheric chemical reactions ("secondary" emissions). Further, primary particulate emissions are being distinguished from filterable and condensable particulate emissions which sum to equal the primary particulate emissions. Emissions reporting requirements are included for these filterable and condensable components of primary PM_{2.5} and primary particulate matter with an aerodynamic diameter of equal to or less than 10 µm (PM₁₀). The proposed rule also addresses a deficiency in ch. NR 438, Wis. Adm. Code, identified by EPA which requires</p>	

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Fiscal Estimate & Economic Impact Analysis

major sources in nonattainment areas, sources with the potential to emit equal to or greater than 100 tons per year of criteria air pollutants or ammonia, and sources with actual emissions equal to or greater than 0.5 ton per year of lead to report annual emissions of all criteria air pollutants and ammonia regardless of emissions amount. The proposed changes will ensure ch. NR 438, Wis. Adm. Code, meets federal requirements in the AERR rule (40 CFR 51, subpart A).

Additionally, the department is proposing to make other revisions to ch. NR 438, Wis. Adm. Code, to (1) align state administrative code language with federal emissions reporting terminology, (2) revise outdated ch. NR 438, Wis. Adm. Code, language and make corresponding updates to ch. NR 484, Wis. Adm. Code, to reflect the department's current emissions inventory process, and (3) create a list of emission units, operations or activities that a facility may exclude from the annual emission inventory. These proposed changes will clarify and modernize the emissions reporting rule language in ch. NR 438, Wis. Adm. Code.

12. Summary of the Businesses, Business Sectors, Associations Representing Business, Local Governmental Units, and Individuals that may be Affected by the Proposed Rule that were Contacted for Comments.

The department contacted numerous entities during the economic impact analysis comment period via email. This outreach included sources that may be affected by, or interested in, the proposed rule, including: potentially affected sources, the Small Business Environmental Council, Wisconsin Manufacturers and Commerce, the American Council of Engineering Companies of Wisconsin, and the Air Management Study Group (AMSG). AMSG is the Air Program's stakeholder working group that includes members representing Clean Wisconsin, environmental law attorneys, environmental consulting firms, electric utilities, public health researchers, and representatives of large and small businesses.

13. Identify the Local Governmental Units that Participated in the Development of this EIA.

This rule does not impact local government units directly. However, the department notified the League of Wisconsin Municipalities and the Wisconsin Counties Association via email so that counties and other local government units were consulted as part of the solicitation process. No local governmental units submitted comments on the EIA.

14. Summary of Rule's Economic and Fiscal Impact on Specific Businesses, Business Sectors, Public Utility Rate Payers, Local Governmental Units and the State's Economy as a Whole (Include Implementation and Compliance Costs Expected to be Incurred)

(A) Economic Impact on Businesses

The department estimates that the economic impact of implementing the revised reporting requirements in Wisconsin will be minimal (\$0-\$50,000). The proposed changes will not involve an emission fee increase for sources and will not require sources to install new emissions monitoring equipment or reporting systems. The proposed rule will result in a small administrative impact to sources in the form of time required to report and certify annual PM_{2.5} emissions if a source's emissions exceed the reporting threshold or to report and certify all criteria air pollutant and ammonia emissions for major sources in nonattainment areas, sources with the potential to emit equal to or greater than 100 tons per year of criteria air pollutants or ammonia, and sources with actual emissions equal to or greater than 0.5 ton per year of lead.

To minimize administrative time associated with annual emissions reporting, the department's web-based air

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emissions inventory reporting program provides information (i.e., emission factors) and an emissions calculator, which the owner or operator of a facility can use to estimate emissions. The program currently includes emission factors for sources to calculate their filterable and condensable PM_{2.5} emissions. Furthermore, the department expects that sources required to report PM_{2.5} emissions under the proposed rule are already familiar with the emissions calculations, since many of these sources likely already report other pollutant emissions under current ch. NR 438, Wis. Adm. Code, requirements.

In addition, the department is providing a proposed list of excluded units, operations, and activities to reduce the emissions reporting burden on sources. The department expects the proposed changes will improve the clarity of Wisconsin's emissions reporting requirements by synchronizing the emissions reporting language between ch. NR 438, Wis. Adm. Code, the department's web-based air emissions inventory reporting program, and the federal AERR rule.

(B) Economic Impacts on Local Governments, Utility Rate Payers and Public Entities

The department does not anticipate that local governments, utility rate payers, or public entities will be economically impacted by the implementation of the proposed rules.

(C) State Economy

The department does not anticipate negative impacts to the state's economy.

(D) Fiscal Impacts:

There are no fiscal impacts to this rule. This rule will not require additional state staff to implement or affect state revenues.

15. Benefits of Implementing the Rule and Alternative(s) to Implementing the Rule

Implementing the proposed rule, specifically, the proposed primary PM_{2.5} reporting requirement will ensure Wisconsin is complying with the AERR rule and has a federally approvable SIP, required under Section 110(a)(2) of the CAA. The proposed changes will also resolve inconsistencies between Wisconsin's emissions reporting rules and those promulgated by the EPA. Additionally, the proposed changes will modernize the state's emissions inventory rule language to reflect the department's current emissions reporting process. Because most of the proposed changes align state and federal language or modernize the emissions reporting process, the department expects the proposed changes would improve the clarity of Wisconsin's emissions reporting requirements, saving time for sources and the department.

The department must ensure that state reporting requirements align with those established in federal code to keep Wisconsin's SIP current. Section 285.14(1), Wis. Stats., requires SIP submittals resulting in regulatory requirements to be promulgated by rule. There are no policy alternatives available for the proposed rules because the proposed actions are required under state and federal law.

Inaction by the department to adopt the proposed rule into Wisconsin Administrative Code could lead to EPA becoming involved to resolve the deficiency, in place of the state, by issuing a federal implementation plan (FIP) and/or sanctions under the CAA. Without a permanent and enforceable primary PM_{2.5} reporting

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ADMINISTRATIVE RULES Fiscal Estimate & Economic Impact Analysis

requirement consistent with the federal AERR rule, the state’s SIP will not be approvable. Specifically, EPA has not approved all elements of Wisconsin’s infrastructure SIPs for the 2012 PM_{2.5} NAAQS or the 2015 O₃ NAAQS because Wisconsin currently does not have a codified PM_{2.5} emissions reporting requirement (81 FR 95043, 85 FR 61673). Disapproval of a SIP would prompt a 2-year clock for the FIP requirement under Section 110(c) of the CAA. Under a FIP, EPA would step in and directly implement PM_{2.5} emissions reporting requirements in the state. The department has a history of working with sources in the state to implement programs through SIP revisions that are consistent with the federal CAA and minimize impacts on sources. If EPA implemented a FIP following disapproval of a Wisconsin SIP revision, under the CAA, the department would not play a role in FIP development. In addition, disapproval of a SIP could trigger sanctions under Section 179 of the CAA and 40 CFR 52.31. Sanctions under the CAA include the loss of federal highway grants.

16. Long Range Implications of Implementing the Rule

The department does not anticipate any adverse long-term implications to implementing the rule. A long-range benefit to this rule is that the state will maintain a legally sufficient SIP.

17. Compare With Approaches Being Used by Federal Government

The revisions to ch. NR 438, Wis. Adm. Code, are being proposed to meet federal requirements in the AERR rule (40 CFR 51, subpart A, and 40 CFR 51.122). This federal rule requires state and local agencies to collect and submit emissions data to the EPA. This rulemaking will satisfy federal emissions reporting requirements and resolve inconsistencies between state and federal emissions inventory reporting.

18. Compare With Approaches Being Used by Neighboring States (Illinois, Iowa, Michigan and Minnesota)

The States of Illinois, Iowa, Michigan, and Minnesota have incorporated PM_{2.5} emissions reporting requirements into their administrative codes.

19. Contact Name

Olivia Salmon

20. Contact Phone Number

(608) 630-5264

This document can be made available in alternate formats to individuals with disabilities upon request.

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Fiscal Estimate & Economic Impact Analysis

ATTACHMENT A

1. Summary of Rule’s Economic and Fiscal Impact on Small Businesses (Separately for each Small Business Sector, Include Implementation and Compliance Costs Expected to be Incurred)

The proposed rule will not have an economic or fiscal impact on small businesses. The proposed changes will not involve an emission fee increase for sources and will not require sources to install new emissions monitoring equipment or reporting systems. If the proposed PM_{2.5} emissions reporting requirement is applicable to a small business, there could be a small administrative impact in the form of time required to report and certify annual PM_{2.5} emissions.

2. Summary of the data sources used to measure the Rule’s impact on Small Businesses

The AERR rule amendments state that the updated reporting requirements “will not have a significant economic impact on a substantial number of small entities under the RFA [Regulatory Flexibility Act].” (80 FR 8794)

3. Did the agency consider the following methods to reduce the impact of the Rule on Small Businesses?

- Less Stringent Compliance or Reporting Requirements
- Less Stringent Schedules or Deadlines for Compliance or Reporting
- Consolidation or Simplification of Reporting Requirements
- Establishment of performance standards in lieu of Design or Operational Standards
- Exemption of Small Businesses from some or all requirements
- Other, describe:

4. Describe the methods incorporated into the Rule that will reduce its impact on Small Businesses

As mentioned in #14 of the EIA, the department’s web-based air emissions inventory reporting program provides emission factors and an emissions calculator, which the owner or operator of a facility can use to estimate emissions. Additionally, the department is providing a proposed list of excluded units, operations, and activities to reduce the emissions reporting burden on sources. The department expects the proposed changes will improve the clarity of Wisconsin’s emissions reporting requirements by synchronizing the emissions reporting language between ch. NR 438, Wis. Adm. Code, the department’s web-based air emissions inventory reporting program, and the federal AERR rule.

5. Describe the Rule’s Enforcement Provisions

Enforcement provisions are included in s. NR 438.03, Wis. Adm. Code, and are updated by the proposed order to reflect the department’s current emissions inventory reporting process.

6. Did the Agency prepare a Cost Benefit Analysis (if Yes, attach to form)

- Yes
- No

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12/10/21

The statement of scope for this rule, SS 116-20, was approved by the Governor on August 13, 2020, published in Register No. 776A4 on August 24, 2020, and approved by the Natural Resources Board on October 28, 2020. This rule was approved by the Governor on insert date.

**ORDER OF THE STATE OF WISCONSIN NATURAL RESOURCES BOARD
REPEALING, RENUMBERING, RENUMBERING AND AMENDING, AMENDING, REPEALING
AND RECREATING AND CREATING RULES**

The Wisconsin Natural Resources Board adopts an order to **repeal** NR 438.04 (1) (Note), (2) (c), (e), (g), (h) and (6); to **renumber** NR 438.02 (1); to **amend** NR 438 (title), 438.01 (2), 438.03 (title), (1) (a), (am) 1., (b), Table 1, (c), (d), (2), (3), (4), (5) (title), (a), (b), (c), and (6), 438.04 (1), (2) (intro.), (b) and (f), 484.06 (4) Table 4D Row (a); to **repeal and recreate** NR 438.02 (2), 438.04 (2) (d), (3), (4), and (5); and to **create** NR 400.03 (4) (jp), 438.02 (1a), (1g), (1i), (1k), (1m), (1o), (1q), (1s), (1u), (3), and (4), 438.03 (1) (af), (am) 3. and 4., and (5) (a) (Note), relating to the incorporation of a PM_{2.5} emissions reporting requirement, alignment of state and federal emissions reporting terminology, updates to reflect current emissions reporting procedure, and affecting small business.

AM-31-19

Analysis Prepared by the Department of Natural Resources

- 1. Statute Interpreted:** Sections 285.11(11), 285.17, 299.15, Stats. The State Implementation Plan developed under s. 285.11(6), Stats., is revised.
- 2. Statutory Authority:** Sections 285.17, 299.15, Stats.
- 3. Explanation of Agency Authority:** The Department of Natural Resources (the department) is required to promulgate by rule the classification of air contaminant sources which may cause or contribute to air pollution and require by rule those discharging air contaminants to report the manner used, amount used and amount discharged for each such contaminant. The department is also required to coordinate the reporting requirements to prevent duplication of reporting requirements.
- 4. Related Statutes or Rules:** Section 299.15, Stats., requires the department to promulgate rules implementing reporting requirements for sources of air contaminants in the state. The proposed rule revisions correspond to the incorporation of an acronym definition in s. NR 400.03, Wis. Adm. Code, and emissions reporting requirements contained in ch. NR 438, Wis. Adm. Code. Additional proposed revisions in s. NR 484.06 *Other government organizations* align ch. NR 484, Wis. Adm. Code, with proposed revisions in ch. NR 438, Wis. Adm. Code.
- 5. Plain Language Analysis:** In 2015 the U.S. Environmental Protection Agency (EPA) finalized amendments to the Air Emissions Reporting Requirements (AERR) rule (40 CFR 51, subpart A, and 40 CFR 51.122). This rule updated requirements for state and local agencies to collect and submit emissions data to the EPA. Currently, some inconsistencies exist between Wisconsin's air emissions reporting requirements codified in ch. NR 438, Wis. Adm. Code, and the AERR rule. The department is proposing to revise ch. NR 438, Wis. Adm. Code, to meet federal requirements in the AERR rule. Updating ch. NR 438, Wis. Adm. Code, will ensure the state has a legally sufficient state implementation plan (SIP), required under Section 110(a)(2) of the federal Clean Air Act (CAA).

The department is proposing to add an emissions reporting requirement for sources that directly emit particulate matter with an aerodynamic diameter of equal to or less than 2.5 µm (PM_{2.5}), which ensures compliance with the AERR rule and maintains an approvable SIP. Related changes include specifying

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that state reporting requirements for particulate matter apply to primary emissions, where primary emissions are directly emitted to the atmosphere, rather than particulate matter formed through atmospheric chemical reactions ('secondary' emissions). Further, primary particulate emissions are being distinguished from filterable and condensable particulate emissions, which sum to equal the primary particulate emissions. Emissions reporting requirements are included for these filterable and condensable components of primary PM_{2.5} and primary particulate matter with an aerodynamic diameter of equal to or less than 10 µm (PM₁₀). The proposed rule also addresses a deficiency in ch. NR 438, Wis. Adm. Code, identified by EPA which requires (1) major sources in nonattainment areas, (2) sources with the potential to emit equal to or greater than 100 tons per year of criteria air pollutants or ammonia, and (3) sources with actual emissions of equal to or greater than 0.5 ton per year of lead to report annual emissions of all criteria air pollutants and ammonia regardless of emissions amount. These proposed changes will ensure ch. NR 438, Wis. Adm. Code, meets federal requirements in the AERR rule (40 CFR 51, subpart A).

Additionally, the department is proposing to make other revisions to ch. NR 438, Wis. Adm. Code, to (1) align state code language with federal emissions reporting terminology, (2) revise outdated ch. NR 438, Wis. Adm. Code, language and make corresponding updates to ch. NR 484, Wis. Adm. Code, to reflect the department's current emissions inventory process, and (3) create a list of emission units, operations or activities that a facility may exclude from the annual emission inventory. These proposed changes will clarify and modernize the emissions reporting rule language in ch. NR 438, Wis. Adm. Code. The specific proposed rule changes are described below.

Alignment of state and federal emissions reporting requirements

SECTIONS 8 and 12 require the owner or operator of a facility to report annual primary PM, primary PM_{2.5}, primary PM₁₀, filterable PM_{2.5}, filterable PM₁₀, and condensable PM emissions if the facility's emissions exceed the reporting threshold in Table 1.

SECTION 9 addresses a deficiency identified by EPA which requires applicable sources under subpart A of 40 CFR 51 to report annual emissions of all criteria air pollutants and ammonia.

Alignment of state and federal emissions reporting terminology

SECTIONS 4-7 renumber or incorporate definitions for terms related to particulate matter and emissions reporting that only apply in ch. NR 438. Although several terms defined in SECTION 5 are currently defined in ch. NR 400, the proposed SECTION 5 definitions are being incorporated to ensure consistency with the definitions in the AERR rule.

Revision to outdated state code language

SECTIONS 1-3, 10, 12-25 align emissions reporting rule language to reflect the department's current emissions inventory process, and reference the specific information requested by the department's web-based air emissions inventory reporting program.

SECTIONS 6, 12, and 25 remove cross references between ss. NR 438.02 (2) and 438.03 (5) (a) and EPA's outdated FIRE emissions factor database (s. NR 484.06 (4) (a)).

Addition of emissions reporting exemption list

SECTION 11 creates a list of emission units, operations or activities that a facility may exclude from the annual emission inventory reported to the department. Sources are not required to quantify emissions from the proposed emissions reporting exclusion list if they are units, operations, or activities that the department has determined are difficult to quantify and emit de minimis amounts of air contaminants.

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6. Summary of, and Comparison with, Existing or Proposed Federal Statutes and Regulations:

The revisions to ch. NR 438, Wis. Adm. Code, are being proposed to meet federal requirements in the AERR rule (40 CFR 51, subpart A, and 40 CFR 51.122). This federal rule requires state and local agencies to collect and submit emissions data to the EPA. This rulemaking will satisfy federal emissions reporting requirements and resolve inconsistencies between state and federal emissions inventory reporting.

7. Summary of Comments Received on the Statement of Scope and How the Agency Took Those Comments into Account in Drafting the Proposed Rule:

A preliminary public hearing was requested by the Joint Committee for the Review of Administrative Rules on August 27, 2020 and was held on October 1, 2020. No public comments were received during the preliminary public hearing and comment period on the statement of scope of the proposed rule.

8. Comparison with Similar Rules in Adjacent States: The States of Illinois, Iowa, Michigan, and Minnesota have incorporated PM_{2.5} emissions reporting requirements into their administrative codes.

9. Summary of Factual Data and Analytical Methodologies Used and How Any Related Findings Support the Regulatory Approach Chosen:

In 2008, EPA promulgated the AERR rule (40 CFR part 51, subpart A) to coordinate and streamline emissions inventory reporting requirements with existing requirements of the CAA and 1990 Amendments. Under the AERR rule, states and local air pollution control agencies are required to submit emissions inventories for criteria pollutants to EPA. The EPA uses these submittals to build the national inventory of air pollutant emissions (National Emissions Inventory; NEI). A comprehensive inventory updated at regular intervals is essential to allow EPA to fulfill its mandate to monitor and plan for the attainment and maintenance of the national ambient air quality standards established for criteria pollutants.

In 2015, EPA finalized amendments to the AERR rule (40 CFR 51, subpart A, and 40 CFR 51.122). The rule's updated requirements improved consistency and clarity with other federal rules and better reflects current inventory technologies and practices. The department must ensure that state reporting requirements align with those established in federal code in order to keep Wisconsin's SIP current. Section 285.14 (1), Stats., requires SIP submittals resulting in regulatory requirements to be promulgated by rule. There are no policy alternatives available for the proposed rules because the proposed actions are required under state and federal law.

Information and materials developed by EPA in support of the AERR rule amendments can be found on EPA's website at <https://www.epa.gov/air-emissions-inventories/air-emissions-reporting-requirements-aerr#additional-resources> and in the regulatory docket (EPA-HQ-OAR-2004-0489) associated with the 2015 amended rule (80 FR 8787). This information is applicable also to the adoption of the amended AERR requirements into the Wisconsin Administrative Code.

10. Analysis and Supporting Documents Used to Determine the Effect on Small Business or in Preparation of an Economic Impact Report:

The department estimates that the economic impact of implementing the revised reporting requirements in Wisconsin will be minimal (\$0-\$50,000). The proposed changes will not involve an emission fee increase for sources and will not require sources to install new emissions monitoring equipment or reporting systems. The proposed rule will result in a small administrative impact to sources in the form of time required to report and certify annual PM_{2.5} emissions if a source's emissions exceed the reporting threshold or to report and certify all criteria air pollutant and ammonia emissions for an applicable source under subpart A of 40 CFR 51.

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To minimize administrative time associated with annual emissions reporting, the department's web-based air emissions inventory reporting program provides information (i.e., emission factors) and an emissions calculator, which the owner or operator of a facility can use to estimate emissions. The program currently includes emission factors for sources to calculate their filterable and condensable PM_{2.5} emissions. Furthermore, the department expects that sources required to report PM_{2.5} emissions under the proposed rule are already familiar with the emissions calculations, since many of these sources likely already report other pollutant emissions under current ch. NR 438, Wis. Adm. Code, requirements.

In addition, the department has streamlined reporting requirements by creating a proposed list of excluded units, operations and activities to reduce the emissions reporting burden on sources. The department expects the proposed changes will improve the clarity of Wisconsin's emissions reporting requirements by synchronizing the emissions reporting language between ch. NR 438, Wis. Adm. Code, the department's web-based air emissions inventory reporting program, and the federal AERR rule.

The department does not anticipate that local governments, utility rate payers, public entities, or the state's economy will be economically impacted by the implementation of the proposed rules. The proposed rules will not require additional state staff to implement or affect state revenues.

11. Effect on Small Business (initial regulatory flexibility analysis): The AERR rule amendments state that the updated reporting requirements "will not have a significant economic impact on a substantial number of small entities under the RFA [Regulatory Flexibility Act]. This action will not impose any new requirements on small entities. This action corrects and clarifies emissions reporting requirements and provides states with additional flexibility in how they collect and report their emissions data, thereby reducing overall collection and reporting burdens and their associated costs." (80 FR 8794).

The department expects that few, if any, small businesses will be required to report PM_{2.5} emissions under the proposed rule since source applicability is determined by a five ton per year emission threshold. If applicable, the proposed rule changes would have a small administrative impact on the small businesses; there would be no economic impact. Furthermore, the department expects that if there are any small businesses required to report PM_{2.5} emissions under the proposed rule that they are already familiar with the emissions calculations, since these sources likely already report other pollutant emissions under current ch. NR 438, Wis. Adm. Code, requirements. As mentioned in #10 above, the department has taken steps to minimize administrative time associated with annual emissions reporting, including providing an emissions calculator directly on the department's web-based air emissions inventory reporting program and providing a list of emission units, operations, and activities that a facility may exclude from the annual emission inventory.

12. Agency Contact Person: Olivia Salmon, Bureau of Air Management, Wisconsin Department of Natural Resources PO Box 7921, Madison, WI 53703; (608) 630-5264; OliviaE.Salmon@Wisconsin.gov.

13. Place where comments are to be submitted and deadline for submission: A public hearing was held on October 29, 2021. Written comments were accepted through November 5, 2021.

RULE TEXT

SECTION 1. NR 400.03 (4) (jp) is created to read:

NR 400.03 (4) (jp) "NAICS" — North American Industry Classification System

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SECTION 2. NR 438 (title) is amended to read:

NR 438 (title) AIR CONTAMINANT ~~EMISSION~~ EMISSIONS INVENTORY REPORTING REQUIREMENTS.

SECTION 3. NR 438.01 (2) is amended to read:

NR 438.01 (2) PURPOSE. The purpose of this chapter is to establish, pursuant to ss. 285.11, 285.13, 285.17, and 299.15 (1) and (2), Stats., requirements for submission of ~~reports~~ emissions inventories for owners or operators of air contaminant sources.

SECTION 4. NR 438.02 (1) is renumbered (1e).

SECTION 5. NR 438.02 (1a), (1g), (1i), (1k), (1m), (1o), (1q), (1s), and (1u) are created to read:

NR 438.02 (1a) “Condensable PM” means a material that is vapor phase at stack conditions but that condenses or reacts upon cooling and dilution in the ambient air to form solid or liquid PM immediately after discharge from the stack.

Note: Condensable PM, if present from a source, is typically in the PM_{2.5} size fraction and, therefore, all of it is a component of both primary PM_{2.5} and primary PM₁₀.

(1g) “Filterable PM” means particles that have an aerodynamic diameter equal to or less than 100 micrometers that are directly emitted by a source as a solid or liquid at stack or release conditions and captured on the filter of a stack test train.

(1i) “Filterable PM_{2.5}” means particles that have an aerodynamic diameter equal to or less than 2.5 micrometers that are directly emitted by a source as a solid or liquid at stack or release conditions and captured on the filter of a stack test train.

(1k) “Filterable PM₁₀” means particles that have an aerodynamic diameter equal to or less than 10 micrometers that are directly emitted by a source as a solid or liquid at stack or release conditions and captured on the filter of a stack test train.

(1m) “Primary PM” means the sum of filterable PM and condensable PM.

(1o) “Primary PM_{2.5}” means the sum of filterable PM_{2.5} and condensable PM.

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(1q) “Primary PM₁₀” means the sum of filterable PM₁₀ and condensable PM.

(1s) “Process” means an activity occurring at a unit device that generates emissions, controls emissions, or discharges emissions.

Note: Examples of processes include combustion, coating, controlling, crushing, or discharging.

(1u) “Process type code” means a brief descriptor of the process type.

SECTION 6. NR 438.02 (2) is repealed and recreated to read:

NR 438.02 (2) “Source classification code” means a process-level code that describes the equipment or operation that is emitting a pollutant.

Note: Source classification codes are available as set forth by EPA’s Emissions Inventory System, which is an information system for storing all current and historical emissions inventory data.

SECTION 7. NR 438.02 (3), and (4) are created to read:

NR 438.02 (3) “Unit device” means the physical equipment or equipment line where a process occurs.

Note: Examples of unit devices include boilers, coating lines, baghouses, and stacks.

(4) “Unit device type code” means a brief descriptor of the unit device type.

SECTION 8. NR 438.03 (title) and (1) (a) are amended to read:

NR 438.03 Required ~~emission inventory reports~~ emissions inventories. **(1)** REPORTABLE AIR CONTAMINANTS AND LEVELS. (a) Except as provided ~~in~~under par. (am), any person owning or operating a facility that emits an air contaminant in quantities above applicable reporting levels, except indirect sources of air pollution, shall annually submit to the department an ~~emission~~emissions inventory ~~report~~ of annual, actual emissions or, for primary particulate matter, primary PM₁₀, primary PM_{2.5}, sulfur dioxide, nitrogen oxides, carbon monoxide and volatile organic compounds, throughput information sufficient for the department to calculate its annual, actual emissions. The reportable air contaminants and applicable reporting levels are listed in Table 1 in this chapter.

SECTION 9. NR 438.03 (1) (af) is created to read:

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NR 438.03 (1) (af) The owner or operator of a facility shall annually submit to the department an emissions inventory for sulfur dioxide, nitrogen oxides, carbon monoxide, volatile organic compounds, primary PM₁₀, primary PM_{2.5}, ammonia, and lead and lead compounds, if the facility meets any of the following:

1. The facility is a Part 70 major source, as defined under 40 CFR 70.2.
2. The facility is a nonattainment area major source, as defined in s. NR 408.02 (21).
3. The facility has the potential to emit equal to or greater than 100 tons per year of ammonia.
4. The facility has actual emissions equal to or greater than 0.5 ton per year of lead.

SECTION 10. NR 438.03 (1) (am) 1. is amended to read:

(am) 1. The owner or operator of a facility described by ~~a standard industrial classification~~ an SIC code listed in Table D of s. NR 445.11, or that has annual actual emissions of less than 5 tons of particulate matter and less than 3 tons of volatile organic compounds, may limit the information on hazardous air contaminants included in the annual ~~emission-emissions~~ emissions inventory ~~report~~ to those contaminants identified under s. NR 445.11 (1) (a) or (b).

SECTION 11. NR 438.03 (1) (am) 3. and 4. are created to read:

NR 438.03 (1) (am) 3. The owner or operator of a facility may exclude from the annual emissions inventory, emissions from any of the following emissions units, operations, or activities:

- a. Maintenance of grounds, equipment, and buildings, including lawn care, pest control, grinding, cutting, welding, painting, woodworking, general repairs, and cleaning, but not including use of organic compounds as clean-up solvents.
- b. Boiler, turbine, generator, heating, and air conditioning maintenance.
- c. Pollution control equipment maintenance.
- d. Fire control equipment.
- e. Janitorial activities.
- f. Office activities.

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g. Convenience water heating.

h. Convenience space heating units with combined heat input capacity of less than 5 million Btu per hour that burn gaseous fuels or liquid fuels.

i. Fuel oil storage tanks with a combined capacity of 10,000 gallons or less.

j. Stockpiled contaminated soils.

k. Demineralization and oxygen scavenging of water for boilers.

L. Purging of natural gas lines.

4. The owner or operator of a facility with emissions exceeding the reporting thresholds in this section shall include all emission units, operations, or activities in the annual emissions inventory. The owner or operator of a facility may exclude emissions information required under s. NR 438.04 (3) (d) for any emissions unit, operation, or activity that meets the criteria under s. NR 407.05 (4) (c) 9. a. If the department determines that an emission unit, operation, or activity does not meet the criteria under s. NR 407.05 (4) (c) 9. a., the owner or operator shall include the emissions in the annual emissions inventory.

SECTION 12. NR 438.03 (1) (b), Table 1, (c), (d), (2), (3), (4) and (5) (title) and (a) are amended to read [Note to LRB: Please move Table 1 to end of chapter]:

NR 438.03 (1) (b) When preparing an ~~emission~~emissions inventory ~~report~~, the owner or operator of a facility may rely on information in an approved ~~material~~ safety data sheet. Trace contaminants need not be reported if they constitute less than 1% ~~percent~~ (10,000 parts per million) of the material, or 0.1% ~~percent~~ (1,000 parts per million) of the material if the air contaminant is listed with a control requirement ~~in~~under column (i) of Table A, B or C ~~or~~of s. NR 445.07, unless a hazardous air contaminant is formed in processing the material.

**Table 1
Reporting Levels for Calendar Years 2004 and Later**

Air Contaminant Name	CAS Number ¹	Reporting Level (lbs/yr)
Acetaldehyde.....	75-07-0	404
Acetamide	60-35-5	6,000

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Acetic acid.....	64-19-7	5,774
Acetic anhydride	108-24-7	4,912
Acetone	67-64-1	100,000
Acetonitrile.....	75-05-8	6,000
Acetophenone.....	98-86-2	6,000
2-Acetylaminofluorene.....	53-96-3	6,000
Acrolein.....	107-02-8	75
Acrylamide.....	79-06-1	0.683
Acrylic acid	79-10-7	88.8
Acrylonitrile.....	107-13-1	13.1
Adipic acid.....	124-04-9	1,176
Adiponitrile	111-69-3	2,080
Adriamycin.....	23214-92-8	1.22
Aflatoxins.....	1402-68-2	1.22
Aldrin	309-00-2	58.8
Allyl alcohol.....	107-18-6	279
Allyl chloride	107-05-1	736
Allyl glycidyl ether	106-92-3	1,098
Aluminum alkyls and soluble salts, as Al.....	7429-90-5 ²	471
Aluminum pyro powders, as Al.....	7429-90-5 ²	1,176
o-Aminoazotoluene (2-Aminoazotoluene).....	97-56-3	0.808
4-Aminobiphenyl	92-67-1	0.148
Amitrole	61-82-5	3.29
³ Ammonia	7664-41-7	4,097
Ammonium perfluorooctanoate.....	3825-26-1	2.35
Aniline.....	62-53-3	1,792
o-Anisidine and o-anisidine hydrochloride (mixtures and isomers).....	29191-52-4 ²	22.2
Antimony & compounds, as Sb.....	7440-36-0 ²	118
Antimony trioxide	1309-64-4	17.8

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ANTU	86-88-4	70.6
Arsenic, elemental and inorganic compounds, as As	7440-38-2 ²	0.207
³ Arsine.....	7784-42-1	4.44
Asbestos, all forms	1332-21-4 ²	1.22
Atrazine.....	1912-24-9	1,176
Azathioprine.....	446-86-6	1.74
Azinphos-methyl.....	86-50-0	47.1
Barium, soluble compounds, as Ba	7440-39-3 ²	118
Benomyl.....	17804-35-2	2,353
Benz(a)anthracene.....	56-55-3	8.08
Benzene.....	71-43-2	114
Benzidine	92-87-5	0.0133
Benzo(a)phenanthrene (Chrysene)	218-01-9	12
Benzo(j,k)fluorene	206-44-0	12
Benzo(b)fluoranthene.....	205-99-2	1.22
Benzo(j)phenanthrene	205-82-3	1.22
Benzo(k)fluoranthene.....	207-08-9	1.22
Benzo(a)pyrene	50-32-8	0.808
Benzotrichloride.....	98-07-7	1.22
Benzoyl chloride	98-88-4	940
Benzoyl peroxide	94-36-0	1,176
Benzyl acetate	140-11-4	6,000
Benzyl chloride.....	100-44-7	1,218
Beryllium and beryllium compounds, as Be.....	7440-41-7 ²	0.37
Biphenyl.....	92-52-4	297
Bischloroethyl nitrosourea	154-93-8	1.22
N,N-Bis (2-chloroethyl)-2-naphthylamine (Chlornaphazine).....	494-03-1	1.22
Bis(chloromethyl) ether (BCME) and technical grade	542-88-1	1.22
Bis(2-dimethylaminoethyl) ether (DMAEE).....	3033-62-3	77.1

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Bismuth telluride, as BI ₂ Te ₃ : Se-doped.....	1304-82-1	1,176
Borates, tetra, sodium salts, decahydrate.....	1303-96-4 ²	1,176
Borates, tetra, sodium salts, pentahydrate.....	1303-96-4 ²	235
Boron tribromide.....	10294-33-4	3,352
³ Boron trifluoride.....	7637-07-2	907
Bromacil.....	314-40-9	2,353
³ Bromine.....	7726-95-6	154
³ Bromine pentafluoride.....	7789-30-2	168
Bromodichloromethane.....	75-27-4	24
Bromoform.....	75-25-2	1,216
1,3-Butadiene.....	106-99-0	3.17
sec-Butanol.....	78-92-2	100,000
tert-Butanol.....	75-65-0	100,000
⁴ 2-Butoxyethanol (Ethylene glycol monobutyl ether; EGBE; Butyl cellosolve).....	111-76-2	6,000
n-Butyl alcohol (n-Butanol).....	71-36-3	6,000
n-Butyl acetate.....	123-86-4	100,000
t-Butyl acetate.....	540-88-5	see footnote 7
n-Butyl acrylate.....	141-32-2	2,467
n-Butylamine.....	109-73-9	4,892
Butylated hydroxyanisole (BHA).....	25013-16-5	6,000
tert-Butyl chromate, as Cr.....	1189-85-1	0.074
n-Butyl glycidyl ether (BGE).....	2426-08-6	6,000
n-Butyl lactate.....	138-22-7	6,000
o-sec-Butylphenol.....	89-72-5	6,000
p-tert-Butyltoluene.....	98-51-1	1,426
C.I. Basic Red 9 monohydrochloride.....	569-61-9	12.5
Cadmium and cadmium compounds, as Cd.....	7440-43-9 ²	0.494
Calcium cyanamide.....	156-62-7	118
Calcium hydroxide.....	1305-62-0	1,176
Calcium oxide.....	1305-78-8	471

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Camphor (synthetic).....	76-22-2	2,930
Caprolactam (aerosol and vapor).....	105-60-2	5,444
Captafol.....	2425-06-1	23.5
Captan	133-06-2	1,176
Carbaryl.....	63-25-2	1,176
Carbofuran	1563-66-2	23.5
Carbon dioxide	124-38-9	100,000 tons
Carbon monoxide.....	630-08-0	10,000
Carbon black	1333-86-4	823
Carbon disulfide.....	75-15-0	6,000
Carbon tetrabromide.....	558-13-4	319
Carbon tetrachloride.....	56-23-5	59.2
Carbonyl fluoride.....	353-50-4	1,270
Carbonyl sulfide.....	463-58-1	6,000
Catechol (Pyrocatechol)	120-80-9	5,298
Refractory Ceramic Fibers (respirable size).....	2	1.22
Cesium hydroxide	21351-79-1	471
Chloramben.....	133-90-4	6,000
Chlorambucil.....	305-03-3	0.00683
Chlordane	57-74-9	118
Chlorendic acid	115-28-6	34.2
Chlorinated camphene (Toxaphene).....	8001-35-2	2.78
Chlorinated diphenyl oxide	55720-99-5	118
Chlorinated paraffins (C12; 60% chlorine)	108171-26-2	35.5
³ Chlorine	7782-50-5	341
³ Chlorine dioxide	10049-04-4	64.9
³ Chlorine trifluoride	7790-91-2	124
Chloroacetic acid.....	79-11-8	6,000
2-Chloroacetophenone	532-27-4	74.4

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Chlorobenzene (Monochlorobenzene)	108-90-7	6,000
Chlorobenzilate	510-15-6	6,000
o- Chlorobenzylidene malononitrile.....	2698-41-1	126
Chlorobromomethane.....	74-97-5	100,000
³ 1-Chloro-1, 1-difluoroethane (Hydrochlorofluorocarbon-142b; HCFC-142b; R-142b) ..	75-68-3	6,000
³ Chlorodifluoromethane (Hydrochlorofluorocarbon-22; HCFC-22; R-22).....	75-45-6	6,000
1-(2-Chloroethyl)-3-cyclohexyl-1-nitrosourea (CCNU).....	13010-47-4	1.22
³ Chlorofluorocarbon-11 (CFC-11; R-11; Trichlorofluoromethane)	75-69-4	6,000
³ Chlorofluorocarbon-111 (CFC-111)	954-56-3	6,000
³ Chlorofluorocarbon-112 (CFC-112)	76-12-0	6,000
³ Chlorofluorocarbon-113 (CFC-113; R-113; Trichlorotrifluoroethane).....	76-13-1	6,000
³ Chlorofluorocarbon-114 (CFC-114; R-114; Dichlorotetrafluoroethane)	76-14-2	6,000
³ Chlorofluorocarbon-115 (CFC-115; R-115; Monochloropentafluoroethane)	76-15-3	6,000
³ Chlorofluorocarbon-12 (CFC-12; R-12; Dichlorodifluoromethane).....	75-71-8	6,000
³ Chlorofluorocarbon-13 (CFC-13; R-13; Chlorotrifluoromethane).....	75-72-9	6,000
³ Chlorofluorocarbon-211 (CFC-211; R-211)	422-78-6	6,000
³ Chlorofluorocarbon-212 (CFC-212; R-212)	3182-26-1	6,000
³ Chlorofluorocarbon-213 (CFC-213; R-213)	165-97-7	6,000
³ Chlorofluorocarbon-214 (CFC-214; R-214)	29255-31-0	6,000
³ Chlorofluorocarbon-215 (CFC-215; R-215)	4259-43-2	6,000
³ Chlorofluorocarbon-216 (CFC-216; R-216)	661-97-2	6,000
³ Chlorofluorocarbon-217 (CFC-217; R-217)	422-86-6	6,000
Chloroform.....	67-66-3	38.6
Chloromethyl methyl ether (CMME)	107-30-2	1.22
1-Chloro-1-nitropropane	600-25-9	2,378
Chloropicrin (Trichloronitromethane).....	76-06-2	158
β-Chloroprene	126-99-8	1.22
o-Chlorostyrene.....	2039-87-4	6,000
o-Chlorotoluene.....	95-49-8	6,000

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Chlorpyrifos	2921-88-2	47.1
Chromium (metal) and compounds other than chromium (VI) ...	7440-47-3 ²	118
Chromium (VI): Chromic acid mists and dissolved Cr (VI) aerosols, as Cr	7440-47-3 ²	0.074
Chromium (VI) compounds and particulates	7440-47-3 ²	0.074
Chromyl chloride, as Cr	14977-61-8	0.074
Cobalt, elemental, and inorganic compounds, as Co	7440-48-4 ²	4.71
³ Coke oven emissions.....	2	1.43
Copper and compounds, fume, as Cu	7440-50-8 ²	47.1
Copper and compounds, dust & mists, as Cu	7440-50-8 ²	235
p-Cresidine	120-71-8	20.7
Cresol (mixtures and isomers).....	1319-77-3 ²	5,203
Crotonaldehyde	4170-30-3 ²	281
Crufomate.....	299-86-5	1,176
Cumene (Isopropyl benzene).....	98-82-8	6,000
Cyanamide	420-04-2	471
Cyanides, (inorganics), as CN.....	143-33-9 ²	1,635
Cyanogen	460-19-5	5,008
Cyanogen chloride	506-77-4	247
Cyclohexanol	108-93-0	6,000
Cyclohexanone.....	108-94-1	6,000
Cyclohexylamine.....	108-91-8	6,000
Cyclonite.....	121-82-4	118
Cyclopentadiene.....	542-92-7	6,000
Cyclophosphamide.....	50-18-0	5.23
Cyhexatin	13121-70-5	1,176
2,4-D, salts and esters.....	94-75-7	6,000
Dacarbazine.....	4342-03-4	0.0635
DDE	72-55-9	6,000
Demeton.....	8065-48-3	24.9

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Diacetone alcohol.....	123-42-2	6,000
2,4-Diaminoanisole sulfate.....	39156-41-7	240
2,4-Diaminotoluene (Toluene-2,4-diamine).....	95-80-7 ²	0.808
Diazinon.....	333-41-5	23.5
Diazomethane.....	334-88-3	80.9
Dibenz(a,h)acridine.....	226-36-8	8.08
Dibenz(a,j)acridine.....	224-42-0	8.08
Dibenz(a,h)anthracene.....	53-70-3	0.74
7H-Dibenzo(c,g)carbazole.....	194-59-2	0.808
Dibenzofurans.....	132-64-9 ²	6,000
Dibenzo(a,e)pyrene.....	192-65-4	0.808
Dibenzo(a,h)pyrene.....	189-64-0	0.0808
Dibenzo(a,i)pyrene.....	189-55-9	0.0808
Dibenzo(a,l)pyrene.....	191-30-0	0.0808
³ Diborane.....	19287-45-7	26.6
1,2-Dibromo-3-chloropropane (DBCP).....	96-12-8	0.468
1,2-Dibromoethane (Ethylene Dibromide; EDB).....	106-93-4	4.04
2-N-Dibutylaminoethanol.....	102-81-8	834
Dibutylphenyl phosphate.....	2528-36-1	826
Dibutyl phthalate (Di-n-butyl phthalate).....	84-74-2	1,176
o-Dichlorobenzene (1,2-Dichlorobenzene).....	95-50-1	6,000
p-Dichlorobenzene (1,4-Dichlorobenzene).....	106-46-7	80.8
3,3'-Dichlorobenzidine.....	91-94-1	2.61
1,3-Dichloro-5,5-dimethyl hydantoin.....	118-52-5	47.1
Dichlorodiphenyltrichloroethane (DDT).....	50-29-3	9.16
1,1-Dichloroethane (Ethylidene dichloride).....	75-34-3	6,000
1,2-Dichloroethane (Ethylene dichloride; EDC).....	107-06-2	34.2
Dichloroethyl ether (Bis(2-chloroethyl)ether).....	111-44-4	6,000
1,2-Dichloroethylene.....	540-59-0	6,000

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1,1-Dichloro-1-nitroethane.....	594-72-9	2,771
1,3-Dichloropropene	542-75-6	222
2,2-Dichloropropionic acid	75-99-0	1,176
Dichlorvos.....	62-73-7	44.4
Dicrotophos.....	141-66-2	58.8
Dicyclopentadiene.....	77-73-6	6,000
Dieldrin	60-57-1	58.8
Diethanolamine	111-42-2	471
Diethylamine.....	109-89-7	3,519
2-Diethylaminoethanol.....	100-37-8	2,255
Diethylene triamine.....	111-40-0	993
Diethyl hexyl phthalate (Bis(2-ethyl hexyl) phthalate; Di-sec-octyl phthalate; DEHP)	117-81-7	1,176
Diethyl phthalate	84-66-2	1,176
Diethylstilbestrol (DES).....	56-53-1	0.00888
Diethyl sulfate.....	64-67-5	1.22
Diethyl ketone.....	96-22-0	100,000
1,1-Difluoroethane	75-37-6	6,000
Diglycidyl ether (DGE).....	2238-07-5	125
Diglycidyl resorcinol ether.....	101-90-6	1.81
1,8-Dihydroxyanthroquinone (Danthron).....	117-10-2	40.4
Diisobutyl ketone	108-83-8	6,000
Diisopropylamine.....	108-18-9	4,869
N,N-Dimethyl acetamide.....	127-19-5	6,000
Dimethylamine.....	124-40-3	2,169
4-Dimethylaminoazobenzene.....	60-11-7	0.683
Dimethylaniline (N,N-Dimethylaniline)	121-69-7	5,830
3,3'-Dimethylbenzidine (o-Tolidine)	119-93-7	1.22
Dimethyl carbamoyl chloride.....	79-44-7	0.24
Dimethylethoxysilane.....	14857-34-2	501

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N,N-Dimethylformamide	68-12-2	2,665
1,1-Dimethylhydrazine.....	57-14-7	1.22
Dimethylphthalate	131-11-3	1,176
Dimethyl sulfate	77-78-1	1.22
Dinitolmide	148-01-6	1,176
Dinitrobenzene (mixtures and isomers).....	528-29-0 ²	243
Dinitro-o-cresol (4,6-Dinitro-o-cresol).....	534-52-1	47.1
2,4-Dinitrophenol.....	51-28-5	6,000
Dinitrotoluene (mixtures and isomers).....	25321-14-6 ²	47.1
n-Dioctyl phthalate.....	117-84-0	6,000
1,4-Dioxane (1,4-Diethylene oxide).....	123-91-1	115
Dioxathion.....	78-34-2	47.1
Diquat, respirable dust (various compounds) (Diquat dibromide).....	2764-72-9 ²	23.5
Diquat, total dust (various compounds) (Diquat dibromide)	2764-72-9 ²	118
Direct black 38 (Benzidine-based dye)	1937-37-7	0.423
Direct blue 6 (Benzidine-based dye)	2602-46-2	0.423
Disperse Blue 1	2475-45-8	683
Disulfiram	97-77-8	471
Disulfoton.....	298-04-4	23.5
Divinyl benzene (mixtures and isomers).....	1321-74-0 ²	6,000
Endosulfan	115-29-7	23.5
Endrin.....	72-20-8	23.5
Epichlorohydrin (1-Chloro-2,3-epoxypropane).....	106-89-8	88.8
EPN.....	2104-64-5	23.5
1,2-Epoxybutane (1,2-Butylene oxide)	106-88-7	1,777
Ethanolamine	141-43-5	1,763
Ethion.....	563-12-2	94.1
⁴ 2-Ethoxyethanol (Ethylene glycol monoethyl ether; EGEE; Cellosolve)	110-80-5	4,336
⁴ 2-Ethoxyethyl acetate (Ethylene glycol monoethyl ether acetate; EGEEA; Cellosolve acetate)	111-15-9	6,000

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Ethyl acetate	141-78-6	100,000
Ethyl acrylate	140-88-5	4,817
Ethylamine (Ethanamine).....	75-04-7	2,169
Ethyl amyl ketone	541-85-5	6,000
Ethyl benzene.....	100-41-4	6,000
Ethyl bromide.....	74-96-4	5,243
Ethyl tert-butyl ether (ETBE).....	637-92-3	4,916
Ethyl butyl ketone	106-35-4	6,000
Ethyl chloride (Chloroethane).....	75-00-3	6,000
Ethyl cyanoacrylate.....	7085-85-0	241
Ethylene chlorohydrin.....	107-07-3	1,077
Ethylenediamine.....	107-15-3	5,783
Ethylene glycol vapor and aerosol	107-21-1	6,000
Ethylene oxide.....	75-21-8	10.1
Ethylene thiourea	96-45-7	68.3
Ethylenimine (Aziridine).....	151-56-4	207
Ethylidene norbornene	16219-75-3	6,000
N-Ethylmorpholine	100-74-3	5,542
Ethyl silicate.....	78-10-4	6,000
Fenamiphos	22224-92-6	23.5
Fensulfothion	115-90-2	23.5
Fenthion	55-38-9	47.1
Fine mineral fibers (includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers, or other mineral derived fibers, of average diameter 1 micrometer or less).....	2	6,000
Flour dust (inhalable fraction).....	2	118
Fluorides, (inorganics), as F.....	2	588
³ Fluorine.....	7782-41-4	366
Fonofos	944-22-9	23.5
Formaldehyde.....	50-00-0	68.3

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Formamide	75-12-7	4,334
Formic acid	64-18-6	2,214
Furan	110-00-9	1.22
Furfural	98-01-1	1,849
Furfuryl alcohol.....	98-00-0	6,000
³ Germanium tetrahydride	7782-65-2	147
Glutaraldehyde	111-30-8	67
Glycidol.....	556-52-5	1.22
⁵ Glycol ethers.....	2	6,000
Graphite (all forms except graphite fiber)	7782-42-5	471
³ Halon-1211 (Bromochlorodifluoromethane)	353-59-3	6,000
³ Halon-1301 (Bromotrifluoromethane)	75-63-8	6,000
³ Halon-2402 (Dibromotetrafluoroethane)	124-73-2	6,000
Heptachlor and heptachlor epoxide	76-44-8	11.8
Hexachlorobenzene (HCB)	118-74-1	0.471
Hexachlorobutadiene.....	87-68-3	50.2
Hexachlorocyclopentadiene	77-47-4	26.2
Hexachloroethane.....	67-72-1	222
Hexachloronaphthalene	1335-87-1	47.1
Hexamethyl phosphoramide.....	680-31-9	1.22
Hexamethylene-1,6-diisocyanate (HDI).....	822-06-0	0.888
n-Hexane	110-54-3	6,000
1,6- Hexanediamine	124-09-4	559
1-Hexene	592-41-6	6,000
sec-Hexyl acetate	108-84-9	6,000
Hexylene glycol	107-41-5	6,000
Hydrazine and hydrazine sulfate	302-01-2 ²	0.181
³ Hydrochlorofluorocarbon-121 (HCFC-121)	2	6,000
³ Hydrochlorofluorocarbon-122 (HCFC-122)	2	6,000

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³ Hydrochlorofluorocarbon-123 (HCFC-123, R-123)	306-83-2 ²	6,000
³ Hydrochlorofluorocarbon-124 (HCFC-124, R-124)	63938-10-3 ²	6,000
³ Hydrochlorofluorocarbon-131 (HCFC-131)	2	6,000
³ Hydrochlorofluorocarbon-132b (HCFC-132b)	1649-08-7	6,000
³ Hydrochlorofluorocarbon-133a (HCFC-133a)	75-88-7	6,000
³ Hydrochlorofluorocarbon-141b (HCFC-141b, R-141b)	1717-00-6	6,000
³ Hydrochlorofluorocarbon-21 (HCFC-21, Dichlorofluoromethane)	75-43-4	6,000
³ Hydrochlorofluorocarbon-221 (HCFC-221)	2	6,000
³ Hydrochlorofluorocarbon-222 (HCFC-222)	2	6,000
³ Hydrochlorofluorocarbon-223 (HCFC-223)	2	6,000
³ Hydrochlorofluorocarbon-224 (HCFC-224)	2	6,000
³ Hydrochlorofluorocarbon-225 ca (HCFC-225ca)	422-56-0	6,000
³ Hydrochlorofluorocarbon-225 cb (HCFC-225cb)	507-55-1	6,000
³ Hydrochlorofluorocarbon-226 (HCFC-226)	2	6,000
³ Hydrochlorofluorocarbon-231 (HCFC-231)	2	6,000
³ Hydrochlorofluorocarbon-232 (HCFC-232)	2	6,000
³ Hydrochlorofluorocarbon-233 (HCFC-233)	2	6,000
³ Hydrochlorofluorocarbon-234 (HCFC-234)	2	6,000
³ Hydrochlorofluorocarbon-235 (HCFC-235)	2	6,000
³ Hydrochlorofluorocarbon-241 (HCFC-241)	2	6,000
³ Hydrochlorofluorocarbon-242 (HCFC-242)	2	6,000
³ Hydrochlorofluorocarbon-243 (HCFC-243)	2	6,000
³ Hydrochlorofluorocarbon-244 (HCFC-244)	2	6,000
³ Hydrochlorofluorocarbon-251 (HCFC-251)	2	6,000
³ Hydrochlorofluorocarbon-252 (HCFC-252)	2	6,000
³ Hydrochlorofluorocarbon-253 (HCFC-253)	2	6,000
³ Hydrochlorofluorocarbon-261 (HCFC-261)	2	6,000
³ Hydrochlorofluorocarbon-262 (HCFC-262)	2	6,000
³ Hydrochlorofluorocarbon-271 (HCFC-271)	2	6,000

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³ Hydrochlorofluorocarbon-31 (HCFC-31; R-31; Chlorofluoromethane).....	593-70-4	6,000
Hydrogenated terphenyls.....	61788-32-7	1,160
³ Hydrogen bromide.....	10035-10-6	3,247
³ Hydrogen chloride (Hydrochloric acid; Muriatic acid).....	7647-01-0	1,777
³ Hydrogen cyanide.....	74-90-8	1,699
³ Hydrogen fluoride (Hydrofluoric acid).....	7664-39-3	803
³ Hydrogen peroxide.....	7722-84-1	327
³ Hydrogen sulfide.....	7783-06-4	3,279
Hydroquinone.....	123-31-9	471
2-Hydroxypropyl acrylate.....	999-61-1	626
Indeno(1,2,3-cd)pyrene.....	193-39-5	8.08
Indium.....	7440-74-6	23.5
³ Iodine.....	7553-56-2	340
Iron dextran complex.....	9004-66-4	1.22
Iron oxide dust and fume, as Fe.....	1309-37-1	1,176
Iron salts, soluble, as Fe.....	2	235
Isobutyl acetate.....	110-19-0	100,000
Isobutyl alcohol.....	78-83-1	6,000
Isooctyl alcohol.....	26952-21-6	6,000
Isophorone.....	78-59-1	6,000
Isophorone diisocyanate.....	4098-71-9	10.7
Isoprene.....	78-79-5	1.22
⁴ 2-Isopropoxyethanol.....	109-59-1	6,000
Isopropylamine.....	75-31-0	2,843
Isopropyl glycidyl ether.....	4016-14-2	6,000
N-Isopropylaniline.....	768-52-5	2,602
Kaolin.....	1332-58-7	471
Kepone (Chlordecone).....	143-50-0	0.193
Ketene.....	463-51-4	202

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Lead Acetate, as Pb	301-04-2	11.1
Lead compounds	7439-92-1 ²	400
Lead Phosphate, as Pb	7446-27-7	74
Lindane and other hexachlorocyclohexane isomers	58-89-9 ²	2.87
Maleic anhydride.....	108-31-6	94.4
Manganese, dust and inorganic compounds, as Mn	7439-96-5 ²	47.1
Melphalan.....	148-82-3	0.024
³ Mercury, as Hg, alkyl compounds	7439-97-6 ²	2.35
³ Mercury, as Hg, aryl compounds	7439-97-6 ²	23.5
³ Mercury, as Hg, inorganic forms including metallic mercury, ..	7439-97-6 ²	5.88
Mesityl oxide.....	141-79-7	6,000
Mestranol	72-33-3	1.22
Methacrylic acid.....	79-41-4	6,000
Methanol	67-56-1	6,000
Methomyl	16752-77-5	588
Methoxychlor	72-43-5	6,000
⁴ 2-Methoxyethanol (Methyl Cellosolve; EGME).....	109-86-4	3,661
⁴ 2-Methoxyethyl acetate (MethylCellosolve acetate; EGMEA)..	110-49-6	5,684
4-Methoxyphenol	150-76-5	1,176
³ Methyl chloroform (1,1,1-Trichloroethane; TCA).....	71-55-6	6,000
Methyl ethyl ketone (2-Butanone; MEK).....	78-93-3	6,000
Methyl acetate	79-20-9	100,000
Methyl acetylene	74-99-7	100,000
Methyl acrylate.....	96-33-3	1,657
Methylacrylonitrile.....	126-98-7	646
Methylamine	74-89-5	1,494
Methyl n-amyl ketone	110-43-0	6,000
N-Methyl aniline	100-61-8	516
Methyl bromide (Bromomethane).....	74-83-9	444

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Methyl n-butyl ketone	591-78-6	4,819
Methyl chloride (Chloromethane)	74-87-3	6,000
5-Methyl chrysene.....	3697-24-3	0.808
Methyl 2-cyanoacrylate	137-05-3	214
Methylcyclohexanol	25639-42-3	6,000
o-Methylcyclohexanone	583-60-8	6,000
Methyl demeton	8022-00-2	118
Methylene bisphenyl isocyanate (Methylene diphenyl isocyanate; MDI)	101-68-8	12
³ Methylene chloride (Dichloromethane)	75-09-2	1,890
4,4'-Methylene bis(2-chloroaniline) (MOCA)	101-14-4	2.07
Methylene bis(4-cyclohexylisocyanate)	5124-30-1	12.6
4,4'-Methylenedianiline (and dihydrochloride).....	101-77-9 ²	1.93
Methyl ethyl ketone peroxide.....	1338-23-4	472
Methyl formate	107-31-3	6,000
Methyl hydrazine	60-34-4	4.43
Methyl iodide (Iodomethane).....	74-88-4	2,732
Methyl isoamyl ketone	110-12-3	6,000
Methyl isobutyl carbinol	108-11-2	6,000
Methyl isobutyl ketone (MIBK; Hexone).....	108-10-1	6,000
Methyl isocyanate	624-83-9	11
Methyl methacrylate.....	80-62-6	6,000
N-Methyl-N'-nitro-N-nitrosoguanidine (MNNG)	70-25-7	0.37
Methyl parathion	298-00-0	47.1
α-Methyl styrene	98-83-9	6,000
Methyl tert-butyl ether (MTBE).....	1634-04-4	6,000
Metribuzin.....	21087-64-9	1,176
Mevinphos (Phosdrin)	7786-34-7	21.2
Mirex.....	2385-85-5	0.174
Molybdenum, as Mo, metal and insoluble compounds	7439-98-7 ²	2,353

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Molybdenum, as Mo, soluble compounds.....	7439-98-7 ²	1,176
Monocrotophos	6923-22-4	58.8
Morpholine.....	110-91-8	6,000
Mustard gas.....	505-60-2	1.22
Myleran (1,4-Butanediol dimethanesulphonate; Busulphan)	55-98-1	1.22
Naled.....	300-76-5	706
Naphthalene	91-20-3	6,000
2-Naphthylamine.....	91-59-8	1.22
Nickel and compounds, as Ni.....	7440-02-0 ²	3.42
Nickel carbonyl, as Ni.....	13463-39-3	3.42
Nickel subsulfide, as Ni	12035-72-2	1.85
Nitric acid.....	7697-37-2	1,213
Nitrilotriacetic acid.....	139-13-9	592
p-Nitroaniline	100-01-6	706
Nitrobenzene	98-95-3	1,185
4-Nitrobiphenyl.....	92-93-3	6,000
p-Nitrochlorobenzene.....	100-00-5	152
Nitroethane.....	79-24-3	6,000
Nitrogen mustards (2,2'-Dichloro-N-methyldiethylamine).....	51-75-2	1.22
³ Nitrogen oxides.....	2	10,000
Nitromethane.....	75-52-5	6,000
4-Nitrophenol	100-02-7	6,000
1-Nitropropane	108-03-2	6,000
2-Nitropropane	79-46-9	1.22
1-Nitropyrene	5522-43-0	8.08
N-Nitrosodi-n-butylamine	924-16-3	0.555
N-Nitrosodiethanolamine	1116-54-7	1.11
N-Nitrosodiethylamine.....	55-18-5	0.0207
N-Nitrosodimethylamine.....	62-75-9	0.0635

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N-Nitrosodi-n-propylamine	621-64-7	0.444
N-Nitroso-N-ethylurea	759-73-9	0.115
N-Nitroso-N-methylurea	684-93-5	0.0261
N-Nitrosomethylvinylamine.....	4549-40-0	1.22
N-Nitrosomorpholine	59-89-2	0.468
N'-Nitrososarcosine	16543-55-8	1.22
N-Nitrosopiperidine	100-75-4	0.329
N-Nitrosopyrrolidine.....	930-55-2	1.46
N-Nitrososarcosine.....	13256-22-9	1.22
Nitrotoluene, mixtures and isomers.....	88-72-2 ²	2,639
Nitrous oxide.....	10024-97-2	6,000
Octachloronaphthalene.....	2234-13-1	23.5
Octachlorostyrene	29082-74-4	10
Octane (all isomers)	111-65-9 ²	100,000
Oestradiol (Estradiol).....	50-28-2	0.0808
Oxalic acid	144-62-7	235
p,p'-Oxybis (benzenesulfonyl hydrazide)	80-51-3	23.5
Paraquat (respirable sizes) (Paraquat chloride)	1910-42-5 ²	23.5
Parathion	56-38-2	23.5
³ Particulate matter	²	10,000
Pentachlorobenzene.....	608-93-5	10
Pentachloronaphthalene	1321-64-8	118
Pentachloronitrobenzene (Quintobenzene; PCNB)	82-68-8	118
Pentachlorophenol (PCP)	87-86-5	118
Pentane, all isomers.....	78-78-4* ²	100,000
Pentyl Acetate (mixtures and isomers).....	628-63-7 ²	6,000
³ Perchloroethylene (Tetrachloroethylene).....	127-18-4	151
Perchloromethyl mercaptan.....	594-42-3	179
Perfluoroisobutylene	382-21-8	26.7

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Persulfates (Ammonium, Potassium, Sodium).....	7727-54-0 ²	23.5
Perylene.....	198-55-0	10
Phenazopyridine and phenazopyridine hydrochloride.....	136-40-3 ²	18.1
Phenol	108-95-2	4,528
Phenolphthalein.....	77-09-8	1.22
Phenothiazine	92-84-2	1,176
Phenylenediamine (mixtures and isomers).....	106-50-3	23.5
Phenyl ether vapor.....	101-84-8	1,638
Phenyl glycidyl ether (PGE).....	122-60-1	145
Phenylhydrazine	100-63-0	104
Phenyl mercaptan	108-98-5	530
Phenytoin and sodium salt of phenytoin.....	57-41-0 ²	1.22
Phorate	298-02-2	11.8
Phosgene	75-44-5	95.2
³ Phosphine.....	7803-51-2	98.2
Phosphoric acid.....	7664-38-2	235
Phosphorus (yellow).....	7723-14-0	23.8
Phosphorus oxychloride	10025-87-3	148
³ Phosphorus pentachloride	10026-13-8	200
Phosphorus pentasulfide.....	1314-80-3	235
³ Phosphorus trichloride	7719-12-2	264
Phthalic anhydride.....	85-44-9	1,425
Picric acid.....	88-89-1	23.5
Pindone	83-26-1	23.5
Platinum (metal).....	7440-06-4	235
Platinum, soluble salts, as Pt	7440-06-4 ²	0.471
<u>PM10.....</u>	<u>2</u>	<u>10,000</u>
Polybrominated biphenyls (PBBs; Bromodiphenyls).....	59536-65-1 ²	0.103
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)..	1336-36-3 ²	0.05

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Polycyclic organic matter (POM).....	2	
Potassium hydroxide	1310-58-3	125
<u>³Primary particulate matter.....</u>	<u>2</u>	<u>654</u>
<u>Primary PM_{2.5}. Also report filterable and condensable components.</u>	<u>2</u>	<u>10,000</u>
<u>Primary PM₁₀. Also report filterable and condensable components.</u>	<u>2</u>	<u>10,000</u>
Procarbazine and procarbazine hydrochloride.....	366-70-1 ²	0.222
1,3-Propane sultone.....	1120-71-4	1.29
Propargyl alcohol.....	107-19-7	539
β-Propiolactone.....	57-57-8	0.222
Propionaldehyde.....	123-38-6	6,000
Propionic acid.....	79-09-4	6,000
Propoxur (Baygon).....	114-26-1	118
Propylene dichloride (1,2-Dichloropropane).....	78-87-5	355
Propylene glycol monomethyl ether (PGME).....	07-98-2	6,000
Propylene oxide.....	75-56-9	240
Propylenimine (2-Methyl aziridine; Propylene imine).....	75-55-8	1.22
Propylthiouracil.....	51-52-5	3.06
Pyrethrum.....	8003-34-7	1,176
Pyridine.....	110-86-1	3,373
Quinoline.....	91-22-5	6,000
Quinone.....	106-51-4	104
Resorcinol.....	108-46-3	6,000
Rhodium (metal) and insoluble compounds, as Rh.....	7440-16-6 ²	235
Rhodium, soluble compounds, as Rh.....	7440-16-6 ²	2.35
Rotenone (commercial).....	83-79-4	1,176
Safrole.....	94-59-7	14.1
Selenium and compounds, as Se.....	7782-49-2 ²	47.1
³ Silicon tetrahydride (Silane).....	7803-62-5	1,545
Sodium Azide, as sodium azide or hydrazoic acid vapor.....	26628-22-8	95.7

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Sodium bisulfite	7631-90-5	1,176
Sodium fluoroacetate.....	62-74-8	11.8
Sodium hydroxide	1310-73-2	654
Sodium metabisulfite.....	7681-57-4	1,176
³ Stibine (Antimony hydride)	7803-52-3	120
Stoddard solvent (Mineral spirits)	8052-41-3	6,000
Streptozotocin	18883-66-4	0.0287
Strong inorganic acid mists containing sulfuric acid (>35% by weight)	7664-93-9 ²	1.22
Strychnine	57-24-9	35.3
Styrene oxide.....	96-09-3	6,000
Styrene, monomer	100-42-5	6,000
Sulfometuron methyl.....	74222-97-2	1,176
Sulfotep (TEDP).....	3689-24-5	47.1
³ Sulfur dioxide	7446-09-5	10,000
Sulfur monochloride.....	10025-67-9	1,806
³ Sulfur tetrafluoride.....	7783-60-0	145
Sulfuric acid	7664-93-9	235
³ Sulfuryl fluoride.....	2699-79-8	4,911
Sulprofos	35400-43-2	235
Talc, containing no asbestos fibers.....	14807-96-6	471
Tantalum, metal and oxide dusts, as Ta.....	7440-25-7	1,176
Tellurium and compounds, except hydrogen telluride, as Te	13494-80-9 ²	23.5
TEPP	107-49-3	11.8
Terphenyls.....	26140-60-3 ²	1,635
1,2,3,4-Tetrachlorobenzene	634-66-2	10
1,2,4,5-Tetrachlorobenzene	95-94-3	10
2,3,7,8-Tetrachlorodibenzo-p-dioxin (Dioxin; 2,3,7,8-TCDD), as dioxin equivalents	1746-01-6 ²	0.00005
1,1,2,2-Tetrachloroethane.....	79-34-5	1,615
Tetrachloronaphthalene.....	1335-88-2	471

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1,1,1,2-Tetrafluoroethane	811-97-2	6,000
Tetrafluoroethylene	116-14-3	1.22
Tetrahydrofuran.....	109-99-9	6,000
Tetranitromethane	509-14-8	1.22
Thallium, elemental and soluble compounds, as Tl.....	7440-28-0 ²	23.5
³ Thionyl chloride.....	7719-09-7	1,592
Thiourea	62-56-6	42.3
Thiram.....	137-26-8	235
Tin organic compounds, as Sn.....	7440-31-5 ²	23.5
Tin, metal oxides and inorganic compounds, except tin hydride, as Sn	7440-31-5 ²	471
Titanium tetrachloride	7550-45-0	6,000
Toluene (Toluol)	108-88-3	6,000
2,4-/2,6-Toluene diisocyanate (mixtures and isomers) (TDI).....	584-84-9 ²	6.22
m- and p-Toluidine.....	108-44-1	2,062
o-Toluidine and o-toluidine hydrochloride and mixed isomers ...	95-53-4 ²	17.4
³ Total reduced sulfur and reduced sulfur compounds.....	2	10,000
Tributyl phosphate	126-73-8	513
Tributyl tin	56-35-9	10
1,2,4-Trichlorobenzene	120-82-1	6,000
1,1,2-Trichloroethane	79-00-5	6,000
Trichloroethylene (Trichloroethene)	79-01-6	444
Trichloronaphthalene	1321-65-9	1,176
2,4,5-Trichlorophenol.....	95-95-4	6,000
2,4,6-Trichlorophenol.....	88-06-2	287
1,2,3-Trichloropropane.....	96-18-4	1.22
Triethanolamine	102-71-6	1,176
Triethylamine	121-44-8	974
Trifluralin	1582-09-8	6,000
1,3,5-Triglycidyl-s-triazinetriene	2451-62-9	11.8

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Trimellitic anhydride.....	552-30-7	13.1
Trimethyl benzene, (mixtures and isomers)	25551-13-7 ²	6,000
Trimethylamine.....	75-50-3	2,844
2,2,4-Trimethylpentane	540-84-1	6,000
2,4,6-Trinitrotoluene (TNT).....	118-96-7	23.5
Triorthocresyl phosphate.....	78-30-8	23.5
Triphenyl phosphate.....	115-86-6	706
Tris(1-aziridinyl)phosphine sulfide (Thiotepa)	52-24-4	0.261
Tris(2,3-dibromopropyl phosphate).....	126-72-7	1.35
Tungsten - metal and insoluble compounds, as W	7440-33-7 ²	1,176
Tungsten - soluble compounds, as W	7440-33-7 ²	235
Uranium (natural), soluble and insoluble compounds, as U.....	7440-61-1 ²	47.1
Urethane (Ethyl carbamate).....	51-79-6	3.06
n-Valeraldehyde	110-62-3	6,000
Vanadium pentoxide, as V ₂ O ₅ , respirable dust and fume.....	1314-62-1	11.8
Vinyl acetate	108-05-4	6,000
Vinyl bromide	593-60-2	515
Vinyl chloride.....	75-01-4	101
Vinyl cyclohexene dioxide (4-Vinyl-1-cyclohexene diepoxide) .	106-87-6	1.22
4-Vinyl cyclohexene	100-40-3	104
Vinyl fluoride.....	75-02-5	443
Vinylidene chloride (1,1-Dichloroethylene).....	75-35-4	4,665
Vinylidene fluoride.....	75-38-7	100,000
Vinyl toluene.....	25013-15-4	6,000
^{3,6} Volatile organic compounds (Reactive organic gases).....	2	6,000
Warfarin	81-81-2	23.5
Xylene (mixtures and isomers) (Xylol; Dimethyl Benzene)	1330-20-7 ²	6,000
m-Xylene- α,α' -diamine.....	1477-55-0	32.7
Xylidine (mixtures and isomers)	1300-73-8 ²	583

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Yttrium metal and compounds, as Y	7440-65-5 ²	235
Zeolites (Erionite)	66733-21-9	1.22
Zirconium and compounds, as Zr.....	7440-67-7 ²	1,176

¹Chemical Abstract Service or CAS number refers to the unique chemical abstracts service registry number assigned to a specific chemical, isomer or mixture of chemicals or isomers and recorded in the CAS chemical registry system by the Chemical Abstracts Service, PO Box 3012, Columbus, OH 43210, phone 1-614-447-3600.

²Indicates contaminants for which multiple CAS numbers may apply. For contaminants listed as a metal and its compounds, the given CAS number refers to the metal.

³Indicates contaminants for which a fee will be assessed under s. NR 410.04. Emissions of all compounds listed in s. NR 400.02(162)(b) shall be included when determining fees for volatile organic compounds.

⁴Indicates compounds included in the glycol ethers group. In addition to being reported individually when a compound's emissions are above the reporting level, the emissions of these compounds are included in the glycol ethers emission total reported along with emissions of the many other such compounds not listed individually by name.

⁵Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-(OCH₂CH₂)_n-OR' where:

n=1, 2 or 3

R=alkyl C7 or less or

R=phenyl or alkyl substituted phenyl

R'=H or alkyl C7 or less or OR' consists of carboxylic acid ester, sulfate, phosphate, nitrate or sulfonate.

⁶Organic compounds that are not VOC and should not be considered or included here are specified in s. NR 400.02 (162) (a). Emissions of organic compounds specified in s. NR 400.02 (162) (b) shall be considered to determine if the reporting level for VOC is exceeded. Emissions of these compounds, however, shall be reported separately as the individual compound if the reporting level for VOC is exceeded.

⁷Any amount of emissions of this compound shall be reported if the reporting level for VOC emissions is exceeded. See footnote 6 for how to determine if the reporting level for VOC emissions is exceeded.

(c) Notwithstanding par. (a), the department may require any facility to submit an ~~emission~~ emissions inventory report of its annual, actual and maximum theoretical air contaminant emissions.

(d) Any facility that ~~has~~ generates or holds emission reduction credits shall report the credits separately as ~~actual emissions on the annual emission inventory report~~ to the annual emissions inventory.

(2) REPORTING DEADLINE. ~~Reports~~ Emissions inventories required under this section shall be submitted by March 1 of each year for air contaminants emitted during the preceding year. ~~Persons unable to submit reports by March 1 may, upon request to the department, be granted an extension until March 15 for submission of the reports if the department determines that an extension is reasonable under the circumstances~~ Through March 1, persons may be granted a 2-week submittal extension ending on March 15, when requested by email, mail, or other manner prescribed, provided the extension is considered reasonable under the circumstances by the department.

(3) PORTABLE SOURCES. The owner or operator of a portable source shall file ~~one emission an~~ emissions inventory report covering all operations at all locations in the state during the previous year.

(4) REQUIRED RECORDS. ~~Owners and operators~~ An owner or operator of facilities a facility required to file ~~emission inventory reports~~ emissions inventories shall keep accurate and reliable records sufficient to enable verification of the ~~reports~~ emissions inventories by the department. Records shall include data

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on fuel composition and consumption, composition and quantities of raw materials handled ~~which that~~ contribute to emissions, composition and quantities of wastes incinerated, continuous emissions monitoring data and audits, and any results of stack or performance tests together with the names of persons or firms responsible for each test, if applicable. Records shall be retained for 5 years following the year in which the ~~emission~~-emissions inventory ~~report~~ is submitted.

(5) ~~EMISSION~~-EMISSIONS INVENTORY AND CERTIFICATION. (a) Based on the throughput or emissions information submitted ~~pursuant to ss. NR 438.03~~ under this section and s. NR 438.04, the department shall determine each facility's annual actual emissions and typical ozone season day emissions based on emission factors contained in Compilation of Air Pollutant Emission Factors, AP-42, Volume 1: Stationary Point and Area Sources, USEPA-OAQPS, ~~January 1995~~, as incorporated by reference ~~in~~ under s. NR 484.05 (8), or in the ~~FIRE database, USEPA-OAQPS, incorporated by reference in~~ s. NR 484.06 (4) ~~(a)~~ EPA's online database of emissions factors for criteria and hazardous air pollutants. Other emission factors or methods, including, ~~but not limited to~~, mass balance or other use reporting, consumption and analytical methodologies, or continuous emissions monitoring data, if applicable, may be used by the department.

SECTION 13. NR 438.03 (5) (a) (Note) is created to read:

NR 438.03 (5) (a) Note: The EPA's WebFIRE database of emissions factors for criteria and hazardous air pollutants is available at <https://cfpub.epa.gov/webfire/>.

SECTION 14. NR 438.03 (5) (b), (c), and (6) are amended to read:

NR 438.03 (5) (b) The actual annual emissions determined by the department under par. (a) shall constitute the department's annual ~~emission~~-emissions inventory.

(c) By May 31 of each year, the department shall send each owner or operator of a facility ~~which that~~ is required to file an ~~emission inventory report~~ a summary from the department's annual ~~emission inventory~~-emissions inventory a notification that an emissions inventory summary report of the air contaminants emitted by the facility for the previous year has been created by the department. The owner or operator of a facility required to obtain an air pollution control permit under s. 285.60, Stats., and ch. NR 405, 406, 407, or 408, or ~~which that~~ emits volatile organic compounds or nitrogen oxides in an ozone nonattainment area, shall, by June 30 of each year, send a written certification to the department that ~~the summary~~ of its emissions inventory summary report is correct. The certification shall contain the name, title, signature and telephone number of the ~~certifier~~-responsible official, the date of certification,

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and a statement that the information contained in the emissions inventory summary report is accurate to the best knowledge of the owner or operator of that facility.

(6) **DISPUTED EMISSIONS.** Any facility that disputes the emissions inventory summary ~~supplied report created~~ by the department under sub. (5) (c) may request, in writing, that the department review its emissions inventory summary report. The department shall review and supply to the facility, within 14 calendar days of receipt of the facility's written request, information used to prepare the ~~emission~~ emissions inventory and summary report for that facility. If the facility continues to dispute the emissions inventory summary report, it shall supply to the department, within 14 calendar days of receipt of the department's information, the reasons it disputes the ~~summary report~~. The facility shall be notified within 7 calendar days of receipt of this information of the department's decision on whether to adjust the ~~emission~~ emissions inventory and summary ~~recreate the emissions inventory summary report~~. If the facility continues to dispute the emissions inventory summary report, it may appeal the department's final decision pursuant to state law. The responsible official for the facility shall certify any emissions not in dispute by June 30 of each year.

SECTION 15. NR 438.04 (1) is amended to read:

NR 438.04 Content of ~~emission inventory reports~~ emissions inventories. (1) **GENERAL INSTRUCTIONS.** ~~Emission inventory reports~~ Emissions inventories required under this chapter shall be submitted ~~on forms or other media supplied~~ in the manner prescribed by the department. ~~Emission inventory reports~~ Emissions inventories submitted by facilities shall contain the information specified ~~in~~ under s. NR 438.03 (1) and (3) and this section. Emissions shall be reported separately for each ~~source~~ process or group of similar ~~sources~~ processes at each facility.

SECTION 16. NR 438.04 (1) (Note) is repealed.

SECTION 17. NR 438.04 (2) (intro.) and (b) are amended to read:

NR 438.04 (2) FACILITY IDENTIFICATION AND GENERAL INFORMATION. For all facilities the ~~emission inventory report~~ emissions inventories shall include:

(b) The location address of the facility.

SECTION 18. NR 438.04 (2) (c) is repealed.

SECTION 19. NR 438.04 (2) (d) is repealed and recreated to read:

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NR 438.04 (2) (d) The facility's applicable NAICS code and SIC code.

SECTION 20. NR 438.04 (2) (e) is repealed.

SECTION 21. NR 438.04 (2) (f) is amended to read:

NR 438.04 (2) (f) The name ~~and~~, telephone number, mailing address, and email address of the individual to be contacted regarding the ~~emission~~emissions inventory ~~report~~.

SECTION 22. NR 438.04 (2) (g) and (h) are repealed.

SECTION 23. NR 438.04 (3), (4) and (5) are repealed and recreated to read:

NR 438.04 (3) EMISSIONS-GENERATING UNITS. For each emissions-generating unit, the emissions inventory shall include all of the following:

- (a) Unit device identifier.
- (b) Unit device type code.
- (c) Design capacity, if applicable for the unit device type.
- (d) For each emissions-generating process, all of the following:
 1. Process identifier.
 2. Process type code.
 3. Source classification code, except for processes at tanks.
 4. Throughput material type.
 5. Annual throughput.
 6. Maximum and average hourly throughput.
 7. The normal operation schedule in hours per day, days per week, days per year, and percentages of quarterly activity.

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8. The average and maximum sulfur content in percent by weight per fuel, if applicable for the throughput material type.

9. The average and maximum ash content in percent by weight per fuel, if applicable for the throughput material type.

10. For each emission factor, all of the following:

a. Pollutant.

b. Value or formula.

c. Units.

d. Origin.

11. Annual emissions by pollutant.

12. The fractions of emissions in percent that flow to connected controlling or discharging processes and the associated unit device and process identifiers.

13. Annual emissions measured by a continuous emissions monitor and pollutant, if applicable.

(4) EMISSIONS-CONTROLLING UNITS. For each emissions-controlling unit, the emissions inventory shall include all of the following:

(a) Unit device identifier.

(b) Unit device type code.

(c) For each controlling process, all of the following:

1. Process identifier.

2. Process type code.

3. The normal operation schedule in hours per day, days per week, days per year, and percentages of quarterly activity.

4. Control efficiencies by pollutant in percent.

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5. The fractions of emissions in percent that flow to connected controlling or discharging processes and the associated unit device and process identifiers.

(d) For each emissions-generating process, all of the following:

1. Process identifier.

2. Process type code.

3. Source classification code.

4. Throughput material type.

5. Annual throughput.

6. Maximum and average hourly throughput.

7. The normal operation schedule in hours per day, days per week, days per year, and percentages of quarterly activity.

8. The average and maximum sulfur content in percent by weight per fuel, if applicable for the throughput material type.

9. The average and maximum ash content in percent by weight per fuel, if applicable for the throughput material type.

10. For each emission factor, all of the following:

a. Pollutant.

b. Value or formula.

c. Units.

d. Origin.

11. Annual emissions by pollutant.

12. The fractions of emissions that flow to connected controlling or discharging processes and the associated unit device and process identifiers.

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13. Annual emissions measured by a continuous emissions monitor and pollutant, if applicable.

(5) EMISSIONS-DISCHARGING UNITS. For each stack, fugitive, or discharging unit, the emissions inventory shall include all of the following:

- (a) Unit device identifier.
- (b) Unit device type code.
- (c) Discharge height.
- (d) Stack inside top diameter, as applicable.
- (e) Average exit temperature.
- (f) Average exit velocity, as applicable.
- (g) Fugitive release parameters, as applicable.
- (h) For each discharging process, all of the following:
 - 1. Process identifier.
 - 2. Process type code.
 - 3. The normal operation schedule in hours per day, days per week, days per year, and percentages of quarterly activity.

SECTION 24. NR 438.04 (6) is repealed.

SECTION 25. NR 484.06 (4) Table 4D Row (a) is amended to read:

Table 4D		
U.S. Environmental Protection Agency Document References		
Document Number	Title	Incorporated by Reference For
(a) EPA, OAQPS, FIRE 6.23	Factor Information Retrieval Data System, Version 6.23	NR 437.04 (2) (a) 22. NR 438.02 (2) NR 438.03 (5) (a)

SECTION 26. EFFECTIVE DATE. This rule takes effect on the first day of the month following publication in the Wisconsin Administrative Register as provided in s. 227.22 (2) (intro.), Stats.

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SECTION 27. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on [DATE].

Dated at Madison, Wisconsin _____.

STATE OF WISCONSIN
DEPARTMENT OF NATURAL RESOURCES

BY _____

For Preston D. Cole, Secretary

(SEAL)