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 proposes an order to **repeal** NR 438.04 (1) (Note), (2) (c), (e), (g), (h) and (6); to **renumber** NR 438.02 (1); to **renumber and amend** NR 438.03 (1) (b) Table 1; to **amend** NR 438 (title), 438.01 (2), NR 438.03 (1) (a) and (am) 1., NR 438.03 (1) (b), (c), (d), (2), (3), (4), (5) (a), (b), (c), and (6), 438.04 (1) and (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** 400.03 (4) (jp), NR 438.02 (1a), (1c), (1g), (1i), (1k), (1m), (1o), (1q), (1s), (1u), (3), and (4), NR 438.03 (1) (af), (am) 3. 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 285.11(11), 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), and maintain Wisconsin's approval under Title I of the 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 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 (PM_{10}). The proposed rule also addresses a deficiency in ch. NR 438, Wis. Adm. Code, identified by EPA which requires Type A sources under subpart A of 40 CFR 51 to report annual emissions of all criteria air pollutants and ammonia if the sources emit in excess of any of the thresholds listed in Table 1 of Appendix A of subpart A under 40 CFR 51.30. 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.

<u>Alignment of state and federal emissions reporting requirements</u>

SECTIONS 8 and 13 require the owner or operator of a facility to report annual primary PM, primary $PM_{2.5}$, primary PM_{10}, filterable $PM_{2.5}$, filterable PM_{10}, and condensable PM emissions if the facility's emissions exceed the reporting threshold in ch. NR 438, Table 1. Because there are only a few proposed changes to Table 1 in SECTION 13, proposed Table 1 rule language is identified with blue font to facilitate review. These proposed changes may be found on pages 26 and 28 of this document.

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

<u>Alignment of state and federal emissions reporting terminology</u>

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.

<u>Revision to outdated state code language</u>

SECTIONS 1-3, 10, 12, and 14-27 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, 14, and 27 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, which are units, operations, or activities that the department has determined are difficult to quantify and emit de minimis amounts of air contaminants.

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 and maintain Wisconsin approval under Title I of the CAA. 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 a Type A source under subpart A of 40 CFR 51.

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 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, 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:
Written comments may be submitted at the public hearing, by regular mail, or email to:

Olivia Salmon – AM/7
Bureau of Air Management
Wisconsin Department of Natural Resources

PO Box 7921
Madison, WI 53703
OliviaE.Salmon@wisconsin.gov

Comments may be submitted to the department contact person listed above or to DNRAdministrativeRulesComments@wisconsin.gov until the deadline given in the upcoming notice of public hearing. The notice of public hearing and deadline for submitting comments will be published in the Wisconsin Administrative Register and on the department's website, at https://dnr.wi.gov/calendar/hearings/. Comments may also be submitted through the Wisconsin Administrative Rules Website at https://docs.legis.wisconsin.gov/code/chr/active.

RULE TEXT

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

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

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), (1c), (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 PM_{10}.

(1c) "Device" means the physical equipment or equipment line where a process occurs.

(1g) "Filterable PM" means a particle that has an aerodynamic diameter equal to or less than 100 micrometers that is 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 a particle that has an aerodynamic diameter equal to or less than 2.5 micrometers that is 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 PM_{10}" means a particle that has an aerodynamic diameter equal to or less than 10 micrometers that is 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 $PM_{2.5}$.

(1q) "Primary PM_{10}" means the sum of filterable PM_{10} and condensable PM_{10}.

(1s) "Process" means an activity occurring at a 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 (1) (a) is 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 PM_{10}, 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 ch. NR 438, Table 1.

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

NR 438.03 (1) (af) The owner or operator of a facility with potential to emit equal to or greater than any emission rate listed in ch. NR 438, Table 2, shall annually submit to the department an emissions inventory for all of the following pollutants regardless of emissions amount:

1. Sulfur dioxide.
2. Nitrogen oxides.
3. Carbon monoxide.

4. Volatile organic compounds.

5. Primary PM_{10}.

6. Primary $PM_{2.5}$.

7. Ammonia.

Table 2
Pollutants and Potential to Emit

1. Sulfur dioxide: 2500 tpy

2. Nitrogen oxides: 2500 tpy

3. Carbon monoxide: 2500 tpy

4. Volatile organic compounds: 250 tpy

5. Primary PM_{10}: 250 tpy

6. Primary $PM_{2.5}$: 250 tpy

7. Ammonia: 250 tpy

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 inventory ~~report~~ to those contaminants identified under s. NR 445.11 (1) (a) or (b).

SECTION 11. NR 438.03 (1) (am) 3. is 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.

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.

SECTION 12. NR 438.03 (1) (b) is amended to read:

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.

SECTION 13. NR 438.03 (1) (b) Table 1 is renumbered NR 438 Table 1 and amended to read [Note to LRB: Please move Table 1 to end of chapter]:

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
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
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
Bismuth telluride, as BI2Te3: 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
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
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
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
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
Dibutylphenylphosphate	2528-36-1	826
Dibutyl phthalate (Di-n-butylphthalate)	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
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
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-Dioctylphthalate	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
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
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
[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
[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
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
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
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
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'-Nitrosonornicotine	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~~	~~[3]~~	~~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
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 anyhydride	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
~~PM 10~~	~~[2]~~	~~10,000~~

Polybrominated biphenyls (PBBs; Bromodiphenyls)	59536-65-1[2]	0.103
Polychlorinated biphenyls (PCBs; Chlorodiphenyls; Arochlor)	1336-36-3[2]	0.05
Polycyclic organic matter (POM)	[2]	125
Potassium hydroxide	1310-58-3	654
[3]Primary particulate matter	[2]	10,000
Primary $PM_{2.5}$. Also report filterable and condensable components.	[2]	10,000
Primary PM_{10}. Also report filterable and condensable components.	[2]	10,000
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
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
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-triazinetrione	2451-62-9	11.8
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_2O_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
Vinylidine 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
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

[1]Chemical 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.

[2]Indicates 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.

[3]Indicates 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.

[4]Indicates 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.

[5]Glycol ethers include mono- and di-ethers of ethylene glycol, diethylene glycol, and triethylene glycol, R-$(OCH_2CH_2)_n$-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.

[6]Organic 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.

[7]Any 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.

SECTION 14. NR 438.03 (1) (c), (d), (2), (3), (4) and (5) (a) are amended to read:

NR 438.03 (1) (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 emission reduction credits shall report the credits separately ~~as actual emissions on the annual emission inventory report~~.

(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 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 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 15. 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 16. 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, 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~~. 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 17. 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 18. NR 438.04 (1) (Note) is repealed.

SECTION 19. 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 20. NR 438.04 (2) (c) is repealed.

SECTION 21. NR 438.04 (2) (d) is repealed and recreated to read:

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

SECTION 22. NR 438.04 (2) (e) is repealed.

SECTION 23. 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 24. NR 438.04 (2) (g) and (h) are repealed.

SECTION 25. 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.

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.

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.

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

(5) EMISSIONS-DISCHARGING UNITS OR STACKS. For each stack, the emissions inventory shall include all of the following:

(a) Unit device identifier.

(b) Unit device type code.

(c) Stack height.

(d) Stack inside top diameter.

(e) Average exit temperature.

(f) Average exit velocity.

(g) For the discharging process at the stack, 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 26. NR 438.04 (6) is repealed.

SECTION 27. 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 28. 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.

SECTION 29. BOARD ADOPTION. This rule was approved and adopted by the State of Wisconsin Natural Resources Board on [DATE].