

CHAPTER 7019
MINNESOTA POLLUTION CONTROL AGENCY
EMISSION INVENTORY REQUIREMENTS

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7019.0050 GENERAL PROVISIONS OF EMISSION INVENTORY REQUIREMENTS.

References to the administrator in the incorporated federal regulations refer to the commissioner, except when authorities are specifically identified in Code of Federal Regulations or state rule as nondelegable.

Statutory Authority: *MS s 116.07*

History: *44 SR 1030*

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7019.0100 INCORPORATION BY REFERENCE; NOTIFICATION AND RECORD-KEEPING REQUIREMENTS.

Subpart 1. **New source performance standards.** Code of Federal Regulations, title 40, section 60.7, as amended, entitled "Notification and record keeping," is incorporated by reference.

Subp. 2. **National emission standards for hazardous air pollutants.** The following are incorporated by reference:

A. Code of Federal Regulations, title 40, section 63.9, as amended, entitled "Notification requirements."

B. Code of Federal Regulations, title 40, section 63.10, as amended, entitled "Recordkeeping and reporting requirements."

C. Code of Federal Regulations, title 40, section 61.09, as amended, entitled "Notification of Startup."

D. Code of Federal Regulations, title 40, section 61.10, as amended, entitled "Source reporting and waiver request."

Subp. 3. [Repealed, 44 SR 1030]

Statutory Authority: *MS s 116.07*

History: *18 SR 580; 20 SR 2254(NO. 42); 44 SR 1030*

Published Electronically: *April 16, 2020*

7019.1000 NOTIFICATIONS OF DEVIATIONS ENDANGERING HUMAN HEALTH OR THE ENVIRONMENT; SHUTDOWNS AND BREAKDOWNS.

Subpart 1. **Notification of deviations that endanger human health or the environment.** The owner or operator of an emission facility, in the event of any deviation, as defined in part 7007.0100, subpart 8a, that could endanger human health or the environment, must notify, orally or by email, the commissioner or must telephone the state duty officer at 800-422-0798 or 651-649-5451 immediately after discovery of the deviation or immediately after when the deviation reasonably should have been discovered by the owner or operator. Within two working days of the discovery, the owner or operator must submit to the commissioner a written description of the deviation stating:

- A. the cause of the deviation;
- B. the exact dates of the period of the deviation, if the deviation has been corrected;
- C. whether or not the deviation has been corrected;
- D. the anticipated time by which the deviation is expected to be corrected, if not yet corrected; and
- E. steps taken or planned to reduce, eliminate, and prevent reoccurrence of the deviation.

Subp. 2. **Breakdown notification.** The owner or operator of an emission facility, emissions unit, or stationary source must notify the commissioner within 24 hours of a breakdown of more than one hour of any control equipment or process equipment if the breakdown causes any increase in the emissions of any regulated air pollutant. The 24-hour period starts when the breakdown was discovered or reasonably should have been discovered by the owner or operator. However, notification is not required if:

- A. an applicable requirement as defined in part 7007.0100, subpart 7, or compliance document as defined in part 7017.2005, subpart 2, does not require operation of the control equipment;

B. an applicable requirement or compliance document specifies alternative minimum operating conditions for the process or control equipment that are still complied with despite the breakdown; or

C. the facility directly and continuously monitors the emissions with a continuous emissions monitor or similar direct monitoring device that demonstrates emissions do not exceed the applicable limit of any regulated pollutant during the breakdown.

At the time of notification or as soon as possible thereafter, the owner or operator must inform the commissioner of the cause of the breakdown and the estimated duration. The owner or operator must notify the commissioner when the breakdown is over.

Subp. 3. **Shutdown notification.** The owner or operator of an emission facility, emissions unit, or stationary source must notify the commissioner at least 24 hours in advance of a planned shutdown of any control equipment or process equipment if the shutdown would cause any increase in the emissions of any regulated air pollutant. If the owner or operator does not have advance knowledge of the shutdown, the owner or operator must notify the commissioner as soon as possible after the shutdown. However, notification is not required if:

A. an applicable requirement as defined in part 7007.0100, subpart 7, or compliance document as defined in part 7017.2005, subpart 2, allows the shutdown of, or does not require operation of, the control equipment;

B. an applicable requirement or compliance document specifies alternative minimum operating conditions for the process or control equipment that are still complied with despite the shutdown; or

C. the facility directly and continuously monitors the emissions with a continuous emissions monitor or similar direct monitoring device that demonstrates emissions do not exceed the applicable limit of any regulated pollutant during the shutdown.

At the time of notification, the owner or operator must inform the commissioner of the cause of the shutdown and the estimated duration. The owner or operator must notify the commissioner when the shutdown is over.

Subp. 4. **Operation changes.** In any shutdown, breakdown, or deviation covered by subpart 1, 2, or 3, the owner or operator must immediately or as soon as possible considering plant and personnel safety take all practical steps to modify operations to reduce the emission of any regulated air pollutant. No emissions units that have an unreasonable shutdown or breakdown frequency of process or control equipment are permitted to operate.

Subp. 5. **Effect of rule.** Nothing in this part:

A. allows operation of an emission facility, emissions unit, or stationary source that may endanger human health or the environment;

B. allows the owner or operator of an emission facility to violate an applicable requirement or compliance document;

C. excuses compliance with Minnesota Statutes, section 116.061;

D. prevents the agency from exercising its emergency powers under Minnesota Statutes, section 116.11, in the event that conditions warranting such action shall arise; or

E. prevents the owner or operator of an emission facility from establishing the emergency defense described in part 7007.1850 if the owner or operator meets the requirements of that part.

Subp. 6. [Repealed, 46 SR 1209]

Subp. 7. **Transition to amended rule.** The amendments to this part that take effect on January 20, 1998, supersede the requirements of permit conditions based on this part in air emission permits issued by the agency prior to January 1, 1998.

Statutory Authority: *MS s 116.07*

History: *L 1987 c 186 s 15; 18 SR 614; 21 SR 165; 22 SR 1237; 23 SR 2224; 46 SR 1209*

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7019.2000 Subpart 1. [Repealed, 23 SR 1764]

Subp. 2. [Repealed, 23 SR 1764]

Subp. 3. [Repealed, 23 SR 1764]

Subp. 4. [Repealed, 17 SR 440]

Published Electronically: *November 29, 2007*

7019.3000 EMISSION INVENTORY.

Subpart 1. **Emission inventory required.**

A. All owners or operators of emission reporting facilities, as defined in part 7002.0015, subpart 3a, and air toxics reporting facilities, as defined in part 7005.0100, subpart 2d, must submit an annual emission inventory report to the commissioner.

B. The report under item A must meet the following criteria:

(1) the owner or operator of an emission reporting facility must submit the report in a format specified by the commissioner, relating to ammonia, carbon monoxide, particulate matter, and all chargeable pollutants as defined in part 7002.0015, subpart 2a;

(2) the owner or operator of an air toxics reporting facility must submit the report in a format specified by the commissioner, relating to air toxics according to part 7019.3110;

(3) the owner or operator of an emission reporting facility or air toxics reporting facility must submit the report on or before April 1 of the year following the calendar year being reported; and

(4) the responsible official, as defined in part 7007.0100, subpart 21, must sign the report and make the following certification:

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision by qualified personnel. The information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I understand that the data provided in this document will be used by the MPCA to calculate a fee that the facility will be required to pay under Minnesota Rules, part 7002.0065, based on the tons of pollution emitted by the facility."

C. (1) All owners or operators of facilities issued option B registration permits under part 7007.1120 must submit either an emission inventory using methods described under subitem (3) and parts 7019.3020 to 7019.3100 or the certification and VOC-containing material report in subitem (2). The report must be submitted on or before April 1 following the calendar year being reported.

(2) All owners or operators that choose to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (2), must submit a report and certification to the commissioner. The responsible official, as defined in part 7007.0100, subpart 2, must sign the report and make the following certification:

"I certify under penalty of law that the facility described in registration permit number... is eligible for the option B registration permit that it was issued and holds and that the facility purchased or used (as stated in the permit application) gallons of VOC-containing materials in the 12-month reporting period. I further certify that the eligibility of the facility and the quantity of material reported herein were determined under my direction or supervision by qualified personnel. The information used to determine eligibility and the quantity of material reported herein for the registration permit is, to the best of my knowledge and belief, true and accurate. I understand that the information provided in this certification will be used by the MPCA to assess a fee under Minnesota Rules, part 7002.0025, subpart 1, item C, that the facility will be required to pay under Minnesota Rules, part 7002.0065."

(3) All owners and operators that choose to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), must submit an emission inventory report to the commissioner, in a format specified by the commissioner, relating to emissions from the use of VOC-containing materials using methods described in part 7019.3030, subpart 2, and the certification in subitem (2). The certification and emission inventory must be signed by the responsible official, as defined in part 7007.0100, subpart 2.

Subp. 2. **Owner or operator error in reporting data.** If an owner or operator discovers an error in the data after having submitted it to the commissioner, the owner or operator must submit corrected data, with a written explanation of the mistake and why it occurred. If the commissioner agrees that the correction is appropriate, the commissioner must correct the data in the inventory. However, for purposes of assessing the emission fee under part 7002.0025, the commissioner must not accept any correction submitted by an owner or operator that would result in a reduction of tons emitted if the correction is submitted more than 45 days after the mailing date of the previous calendar year's air emissions summary.

Subp. 3. **Mercury emission sources.**

A. Owners or operators of a mercury emission source as defined in part 7005.0100, subpart 23b, must submit an annual emission inventory report of the mercury emissions to the commissioner

in a format specified by the commissioner. The report must be submitted on or before April 1 of the year following the calendar year being reported.

B. Owners or operators of stationary sources that have air emissions of mercury but that are not mercury emission sources must report every three years.

C. Owners or operators of stationary sources that are air toxics reporting facilities must report mercury emissions as provided under part 7019.3110.

Subp. 4. **Possible mercury emission sources.** If the commissioner determines that a stationary source has activity levels or emission factors that indicate that the source may be a mercury emission source, the commissioner may request that the owners or operators quantify the source's mercury emissions using the methods listed in part 7019.3030, subpart 1. The owners or operators must complete the quantification and submit a report to the commissioner within 120 days of the commissioner's request.

Statutory Authority: *MS s 116.062; 116.07*

History: *17 SR 440; 18 SR 614; 18 SR 1059; 21 SR 165; 28 SR 1482; 32 SR 904; 39 SR 386; 50 SR 365*

Published Electronically: *December 4, 2025*

7019.3010 [Repealed, 21 SR 165]

Published Electronically: *November 29, 2007*

7019.3020 CALCULATING ACTUAL EMISSIONS FOR EMISSION INVENTORY.

Subpart 1. **Scope.** Emissions from all emissions units must be reported in the annual emissions inventory report in a format specified by the commissioner.

Subp. 2. **Insignificant activities.** Emission reporting facilities and air toxics reporting facilities are not required to report emissions from insignificant activities listed in part 7007.1300 and conditionally insignificant activities listed in part 7008.4000 unless:

A. the commissioner or owner or operator has determined that emissions from those activities are not insignificant for purposes of permitting under parts 7007.0100 to 7007.1800 or for those activities required to be quantified by a facility issued a capped permit option 1; or

B. the commissioner requests an inventory of fugitive emissions from roads and parking lots, defined as insignificant under part 7007.1300, subpart 3, item G, upon determining that emissions from these sources represent a substantial portion of the facility's total emissions.

Subp. 3. **Calculating emissions.** Except as provided in subparts 4 to 7, all owners or operators of emission reporting facilities, as defined in part 7002.0015, subpart 3a, or facilities issued option B registration permits under part 7007.1120 that choose to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), must calculate emissions based on parts 7019.3030 to 7019.3100, except for any facility that has obtained an option A, C, or D registration permit under part 7007.1115, 7007.1125, or 7007.1130 or a capped permit under parts 7007.1140 to 7007.1148.

Subp. 4. **Calculating emissions for option A permits.** Owners or operators of emission reporting facilities that hold an air emission permit under part 7007.1115, registration permit option A, must report actual emissions calculated for the calendar year for which emissions are being reported in a format specified by the commissioner. The owners or operators of a facility issued an option A registration permit under part 7007.1115 must calculate emissions for all emission units using the methods listed in parts 7019.3030 to 7019.3100.

Subp. 5. **Calculating emissions for option C permits.** All owners or operators of emission reporting facilities that have obtained an air emission permit under part 7007.1125, registration permit option C, must report the quantity of each fuel purchased or used (whichever was stated in the facility's registration permit application) in the calendar year for which emissions are being calculated. The report must apportion the quantity of fuel burned with the type of combustion unit (indirect heating units or internal combustion engines) that it was burned in. The owner or operator must report the quantity of VOC-containing materials purchased or used (whichever is stated in the facility's registration permit application) in the calendar year for which emissions are being calculated and air toxics emissions using the method listed in part 7019.3060. The owners or operators reporting VOC-containing materials purchases or usage must also report the weight factor (WF) of the VOC and air toxics in the materials (weight of VOC per weight of VOC-containing materials) and the density of the materials.

Subp. 6. **Calculating emissions for option D permits.** All owners or operators of emission reporting facilities that have obtained an air emission permit under part 7007.1130, registration permit option D, must report the actual emissions calculated for purposes of compliance demonstration required in part 7007.1130, subpart 3, item E, for the calendar year for which emissions are being reported in a format specified by the commissioner.

Subp. 7. **Calculating emissions for capped permits.** All owners or operators of emission reporting facilities that have obtained an air emission permit under parts 7007.1140 to 7007.1148, capped permit, must report the actual emissions calculated for purposes of compliance demonstration required in part 7007.1146, subpart 2, item H, for the calendar year for which emissions are being reported for all emission units in a format specified by the commissioner.

Subp. 8. **Material balance.** All owners or operators of an emission reporting facility submitting an emission inventory based in whole, or in part, on a material balance calculation must submit a sample material balance calculation with the emission inventory. Such facilities must also maintain a record of the safety data sheets or vendor certification of the VOC, air toxics, mercury, or sulfur content of the material for each material or fuel used and the material balance calculations for five years after the date the emission inventory is submitted.

Subp. 9. **Control equipment.** An emission inventory may be based on the use of control equipment only if the use of the specific control equipment is required under conditions of a permit or applicable requirement as defined in part 7007.0100, subpart 7, or is included in a notification received by the commissioner under part 7007.1150, item C. This subpart applies upon issuance under chapter 7007 of a registration, state, capped, general, or part 70 permit to a stationary source.

Subp. 10. **Control efficiency factors.** An owner or operator submitting the emission inventory must apply control efficiency factors, as defined under part 7005.0100, subpart 9b, to air toxics emissions calculations according to items A and B, unless the control efficiency factor for the pollutant is identified in the permit. The owner or operator must:

- A. use the VOC control efficiency factor for volatile air toxics; and
- B. use the PM10 control efficiency factor for particulate air toxics.

Statutory Authority: *MS s 115.03; 116.062; 116.07*

History: *21 SR 165; 29 SR 626; 32 SR 904; 39 SR 386; 41 SR 763; 43 SR 797; 50 SR 365*

Published Electronically: *December 4, 2025*

7019.3030 METHOD OF CALCULATION.

Subpart 1. **Method hierarchy.** The owner or operator of an emission reporting facility, except one issued an option C or D registration permit under part 7007.1125 or 7007.1130 or a capped permit under parts 7007.1140 to 7007.1148, must calculate the facility's actual emissions using the methods listed in items A to D. The owner or operator of an air toxics reporting facility issued an option D registration permit or a capped permit must calculate air toxics emissions for each emission unit using the methods listed in items A to D, except that similar emission units may be aggregated. The methods are listed in a hierarchy of the most preferred method to the least preferred method. The most preferred method available must be used. Where more than one method is listed in the item, they are considered to be equal in the hierarchy and any can be used:

- A. part 7019.3040 (continuous emission monitor data);
- B. part 7019.3050 (performance test data);
- C. part 7019.3060 (VOC and air toxics material balance), 7019.3065 (mercury material balance), 7019.3070 (SO₂ material balance), 7019.3080 (emission factor), or 7019.3090 (enforceable limitations), as applicable; or
- D. part 7019.3100 (facility proposal).

Subp. 2. **Option B permit fees.** The owner or operator of a facility issued an option B registration permit under part 7007.1120 that chooses to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1):

- A. must calculate the facility's actual emissions using the methods listed in part 7019.3060; and
- B. must not consider the effects of pollution control equipment on emissions from the use of VOC-containing materials when calculating actual emissions for an emissions inventory.

Subp. 3. **Selecting calculation method.** For purposes of selecting a calculation method, a method is considered available if the conditions associated with the method in parts 7019.3040 to 7019.3100 are met. The method described in part 7019.3100 may be used if the proposal is submitted to the commissioner by September 1 of the first calendar year for which the emissions are being

calculated. The commissioner must reject data submitted using the methods described in parts 7019.3040 to 7019.3090 if the conditions for the method are not fully met.

Subp. 4. **Reporting individual pollutants.** An owner or operator of a facility must report individual pollutants to the maximum extent feasible. If the owner or operator cannot report individual pollutants within a group, such as lead compounds or nickel compounds, the owner or operator must report total emissions as a group.

Statutory Authority: *MS s 116.062; 116.07*

History: *21 SR 165; 29 SR 626; 32 SR 904; 39 SR 386; 44 SR 1030; 50 SR 365*

Published Electronically: *December 4, 2025*

7019.3040 CONTINUOUS EMISSION MONITOR (CEM) DATA.

A. If an emission reporting facility or a facility issued an option B registration permit under part 7007.1120 that chooses to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), has collected emissions data through use of a CEM in compliance with the preconditions in subitems (1) and (2), the owner or operator must report that data to the commissioner in the facility's emission inventory. The emission inventory submitted must be based on all the CEM data. The requirements in subitems (1) and (2) must be met:

(1) the CEM has been certified by the commissioner; and

(2) the CEM data have not been rejected by the commissioner due to failure by the owner or operator to comply with parts 7017.1002 to 7017.1220; all applicable permit conditions; and any other applicable state or federal laws pertaining to CEM operation.

B. An emission inventory submitted according to item A must include:

(1) the total operating time of the applicable emission unit and the total operating time of the CEM;

(2) an explanation of how the emissions were calculated based on the CEM data. Except for facilities subject to part 7017.1020, for periods when the CEM is down and the emissions unit is operating, missing emissions data must be substituted with CEM data recorded during a representative period of operation of the emissions unit, and, if applicable, of the control equipment operation during the same calendar year for which the inventory is being submitted. The CEM must have recorded data for at least 90 percent of the hours the emission unit was operated for the calendar year for which the inventory is being submitted. If substitute CEM data meeting these conditions is not available, emissions during periods of CEM downtime must be calculated using the next highest available method on the hierarchy of methods listed in part 7019.3030; and

(3) for facilities subject to part 7017.1020, substitute CEM data in accordance with Code of Federal Regulations, title 40, part 75.

Statutory Authority: *MS s 116.07*

History: 21 SR 165; 23 SR 1764; 46 SR 1209

Published Electronically: May 16, 2022

7019.3050 PERFORMANCE TEST DATA.

A. If an emission reporting facility or mercury emission source as defined in part 7005.0100, subpart 23b, has collected representative emission data through the use of performance tests in compliance with the preconditions in items B and C, and if CEM data under part 7019.3040 is not available, the facility shall calculate its emissions based on performance tests. If the emission data is unrepresentative because fuel or material feed used under the test conditions is substantially different than the conditions under which the emissions unit is normally operated or because the emissions unit has been modified, the facility shall calculate its emissions based on the next highest available method. Emissions unit operating load variation from test load does not make the data unrepresentative. In the event that the facility has collected emission data through the use of performance tests and determines that the data is unrepresentative for any reason, the facility shall submit an explanation of why the data is unrepresentative with the emissions calculated using the next highest available method. The commissioner shall determine if the conditions of the performance test were representative based upon the operating data supplied by the facility for the year of the inventory.

B. All the requirements of parts 7017.2001 to 7017.2060, including the requirement to notify the commissioner prior to conducting performance tests as required in part 7017.2030, subpart 1, all other applicable state and federal laws, and all applicable air emission permit conditions relating to performance testing have been complied with.

C. For facilities that are required to conduct annual performance testing, the test was performed during the calendar year for which the emissions are being calculated. If the commissioner granted the facility an extension to a testing deadline that resulted in the test being performed after the calendar year but prior to the emissions inventory submittal deadline, the data from that test may be used. For facilities that are not required to conduct annual performance testing, the emission factors used are derived from the most recently conducted performance test. Unless required under item D, performance test data may not be more than ten years older than the last date of the emission inventory period and must be representative of operating conditions during the calendar year for which the emission inventory is being submitted.

D. If the most recently conducted performance test data is more than ten years older than the last date of the emission inventory period, then the emission factor derived from the performance test shall be used if it results in higher calculated emissions than any default emission factor allowed under part 7019.3060, 7019.3070, or 7019.3080, as applicable, unless an alternative factor is approved by the commissioner under part 7019.3100 (facility proposal) or unless continuous emission monitor data that satisfies the conditions of part 7019.3040 is available. The performance test data must be representative of operating conditions during the calendar year for which the emission inventory is being submitted. Mercury emission sources, as defined in part 7005.0100, subpart 23b, must follow the testing schedule in item E.

E. Unless a mercury emission source, as defined in part 7005.0100, subpart 23b, is already subject to a compliance demonstration for mercury under another applicable requirement, operating permit, or enforceable agreement, the owners or operators of the source must test according to subitems (1) to (5):

(1) the owners or operators of a mercury emission source in operation on or before September 29, 2014, must conduct an initial performance test for mercury emissions on the emission units and processes described in subitem (2):

(a) the owners or operators must submit the test report to the commissioner within 365 days of September 29, 2014; and

(b) the test must be conducted in compliance with parts 7017.2001 to 7017.2060;

(2) the emission units and processes to be tested are those for which prior testing conducted under chapter 7017, emission factors, or similar calculations indicate actual emissions are three or more pounds of mercury per year from each unit or process;

(3) the owners or operators of a mercury emission source that commences operation or makes a physical or operational change that results in an increase in the potential to emit mercury after September 29, 2014, must conduct an initial performance test for mercury emissions within 180 days of initial start-up or on a schedule established in an air emission permit or other enforceable agreement and submit the test report to the commissioner. "Start-up" has the meaning given in part 7005.0100, subpart 42a. "Potential to emit" has the meaning given in part 7005.0100, subpart 35a;

(4) if a stationary source has mercury emissions from units or processes that are substantially equivalent, the results of testing from one may be applied to the others, scaled for throughput or operating hours. With the test results, the owners or operators must provide documentation that the units or processes are substantially equivalent; and

(5) after the initial test, the owners or operators must conduct subsequent performance tests within 60 months of each prior test:

(a) subsequent performance tests are not required if the owners or operators determine that the stationary source is no longer a mercury emission source as defined under part 7005.0100, subpart 23b; and

(b) if the stationary source becomes a mercury emission source again, the owners or operators must resume conducting subsequent performance tests according to this subitem within 180 days of making the determination that actual emissions exceed the threshold for a mercury emission source.

Statutory Authority: *MS s 116.07*

History: *21 SR 165; 32 SR 904; 39 SR 386*

Published Electronically: *February 3, 2015*

7019.3060 VOLATILE ORGANIC COMPOUND (VOC) AND AIR TOXICS MATERIAL BALANCE.

If the methods in part 7019.3040 or 7019.3050 are unavailable to the owner or operator of an emission reporting facility or a facility issued an option B registration permit under part 7007.1120 that chooses to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), the facility may calculate VOC and air toxics emissions using the material balance method described in this part. This method may be used in conjunction with or instead of emission factors and enforceable limitations methods described in parts 7019.3080 and 7019.3090, where applicable. A person using material balance to calculate VOC and air toxics emissions must determine the total VOC emissions and air toxics emissions (E) as follows:

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

where:

A = the amount of VOC and air toxics entering the process. The amount of VOC used in this calculation must be the amount certified by the supplier, the maximum amount stated on the material safety data sheet, or the amount determined by reference method 24. The amount of air toxic used in the calculation must be the amount certified by the supplier or the maximum amount stated on the safety data sheet, unless an amount has been previously determined by an approved reference methodology.

B = the amount of VOC and air toxics incorporated into the product. This includes VOCs chemically transformed in production. An explanation of this calculation must also be submitted.

C = the amount of VOC and air toxics, if any, leaving the process as waste, or otherwise not incorporated into the product and not emitted to the air. If the actual VOC and air toxics content of the waste is unknown, then C = 0.

CE = the control efficiency, or the product of capture efficiency and collection or destruction efficiency, of any device used to capture and/or control VOC and air toxics emissions, expressed as a decimal fraction of 1.00. The control efficiency must be based on efficiency factors, as defined in part 7005.0100, subpart 9b, including air toxics, or must be based on the control efficiency verified by a performance test conducted according to parts 7017.2001 to 7017.2060 and 7019.3050. The overall efficiency of a pollution control system that uses a hood, as defined in part 7011.0060, subpart 2, as the emission capture device must be based on a capture efficiency of 60 percent. If an alternative capture efficiency has been determined by a performance test conducted according to parts 7017.2001 to 7017.2060 and 7019.3050, that capture efficiency must be used in the calculation of actual emissions.

Statutory Authority: *MS s 116.062; 116.07*

History: *21 SR 165; 46 SR 1209; 50 SR 365*

Published Electronically: *December 4, 2025*

7019.3065 MERCURY MATERIAL BALANCE.

If the methods in parts 7019.3040 and 7019.3050 are unavailable to the owner or operator of an emission reporting facility, the owner or operator of a mercury emission source may calculate mercury air emissions using the material balance method described in this part. This method may be used in conjunction with or instead of emission factors and enforceable limitations methods described in parts 7019.3080 and 7019.3090, where applicable. A person using material balance to calculate mercury emissions must determine the total mercury air emissions (E) as follows:

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

Where:

A = the total amount of mercury entering the process. The amount of mercury used in this calculation must be the amount certified by the supplier, the maximum amount stated on a material safety data sheet, or the maximum amount determined by sample analysis using a reference method.

B = the sum of the amount of mercury incorporated into manufactured products. The owner or operator must submit an explanation of how this quantity was determined.

C = the sum of the amount of mercury leaving the process by a mechanism other than through controlled stack gases or in a product, as when material leaves the process as a waste, is recycled, or is approved for beneficial reuse. The mercury leaving the process by such a mechanism must be established by sample analysis using a reference method. If the actual mercury content of the mercury leaving the process is unknown, then C = 0.

CE = the control efficiency, or the product of capture efficiency and collection or destruction efficiency, of any air pollution control device used to capture or control mercury air emissions, expressed as a decimal fraction of 1.00. The control efficiency must be based on efficiency factors, as defined in part 7005.0100, subpart 9b, or must be based on the control efficiency verified by a performance test conducted according to parts 7017.2001 to 7017.2060.

Statutory Authority: *MS s 116.07*

History: *39 SR 386; 46 SR 1209*

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7019.3070 SO₂ MATERIAL BALANCE.

If the methods in parts 7019.3040 and 7019.3050 are unavailable to the owner or operator of an emission reporting facility, the owner or operator may calculate sulfur dioxide emissions using the SO₂ material balance method described in this part. To use this method, the owner or operator must measure the sulfur content of the fuel and assume that all the sulfur in the fuel is oxidized to sulfur dioxide. This method may be used in conjunction with or instead of emission factors and enforceable limitations methods described in parts 7019.3080 and 7019.3090, where applicable. The sulfur content of each batch of fuel received must be certified by the supplier or an independent laboratory. The sulfur content must be determined using American Society for Testing and Materials (ASTM) methods. The sulfur dioxide emissions must be determined by using the following equation:

$$\text{SO}_2 = \%S/100 \times F/2000 \times 2$$

where:

SO_2 = Sulfur dioxide emissions from a batch of fuel.

%S = Weight percent sulfur in the fuel being burned.

F = Amount of fuel burned by weight in pounds.

2000 = Pounds per ton.

2 or 64/32 = Pounds of sulfur dioxide per pound of sulfur in one pound-mole.

The total sulfur dioxide emissions for the year must be the sum total of the individual batch totals.

Statutory Authority: *MS s 116.07*

History: *21 SR 165; 46 SR 1209*

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7019.3080 EMISSION FACTORS.

A. If the methods in parts 7019.3040 and 7019.3050 are unavailable to the owner or operator of an emission reporting facility or a facility issued an option B registration permit under part 7007.1120 that chooses to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), the owner or operator may calculate the facility's emissions using emission factors as defined in part 7005.0100, subpart 10a, and as described in this part. This method may be used in conjunction with or instead of material balance and enforceable limitations methods described in parts 7019.3060, 7019.3070, and 7019.3090, where applicable. Calculations of actual emissions must be based on operating data multiplied by an emission factor. The owner or operator must include operating data necessary to apply the emission factor used in the calculation of emissions in this method in the emission inventory. Operating data means the data necessary to apply the emission factor to calculate emissions. For example, tons of material handled is the necessary operating data for an emissions factor expressed as "tons of pollutant/ton of material handled."

B. Control equipment efficiency must be based on efficiency factors as defined in part 7005.0100, subpart 9b, including air toxics, or on the efficiency verified by a performance test conducted according to parts 7017.2001 to 7017.2060 and 7019.3050. Calculations of actual emissions from an emission unit through a pollution control system that uses a hood, as defined in part 7011.0060, subpart 2, as the emission capture device must be based on a capture efficiency of 80 percent. If an alternative capture efficiency has been determined by a performance test conducted according to parts 7017.2001 to 7017.2060 and 7019.3050, the owner or operator must use that capture efficiency in the calculation of actual emissions.

Statutory Authority: *MS s 116.062; 116.07*

History: *21 SR 165; 32 SR 904; 46 SR 1209; 50 SR 365*

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7019.3090 ENFORCEABLE LIMITATIONS.

If the methods in part 7019.3040 or 7019.3050 are unavailable to an owner or operator of an emission reporting facility or a facility issued an option B registration permit under part 7007.1120 that chooses to be assessed a fee under part 7002.0025, subpart 1, item C, subitem (1), the owner or operator may calculate actual emissions using any enforceable permit limitation or applicable requirement limitation. This method may be used in conjunction with or instead of material balance and emission factor methods described in parts 7019.3060 to 7019.3080, where applicable. Calculations of actual emissions must be based on operating data multiplied by the limitation. The owner or operator must include operating data and a sample calculation used in the calculation of emissions in this method in the emission inventory. "Operating data" means the data upon which the emission limitation is based. For example, dscf (dry standard cubic feet) for an emission limitation expressed as "gr/dscf" (grains per dry standard cubic feet).

Statutory Authority: *MS s 116.07*

History: *21 SR 165; 46 SR 1209*

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7019.3100 FACILITY PROPOSAL.

A. The owner or operator of an emission reporting facility may propose an alternative method for calculating actual emissions if the owner or operator can demonstrate to the satisfaction of the commissioner either:

(1) that the proposed method is more accurate than the methods in parts 7019.3040 to 7019.3090; or

(2) that none of the methods in parts 7019.3040 to 7019.3090 is technically or economically feasible and the proposed method is accurate.

B. The proposal must include:

(1) a comparison of the accuracy of the proposed method with the alternatives in parts 7019.3040 to 7019.3090;

(2) a detailed description of the proposed method; and

(3) an explanation of why none of the alternatives in parts 7019.3040 to 7019.3090 are technically or economically feasible if the facility is making the proposal under item A, subitem (2).

C. The owner or operator must submit the proposal to the commissioner by September 1 of the year for which the emissions are being calculated. The commissioner must approve the emission reporting facility's proposal if the commissioner finds that the facility has made the demonstration required under item A. If the commissioner rejects the proposal, the commissioner must do so by November 30 of the year for which the emissions are being calculated. Approval of a method expires five years after the year for which emissions were first calculated.

D. The commissioner must revoke approval of the method if, after the first year's emission inventory submittal, the owner or operator or the commissioner has determined that the method described under this part no longer accurately calculates each unit's actual emissions. If the commissioner revokes the approval, the commissioner must do so by November 30 of the year for which the emissions are being calculated.

Statutory Authority: *MS s 116.07*

History: *21 SR 165; 46 SR 1209*

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7019.3110 AIR TOXICS EMISSION INVENTORY AND EMISSIONS REPORTING.

Subpart 1. **Inventory required.** An owner or operator of an air toxics reporting facility, as defined in part 7005.0100, subpart 2d, must include the air toxics emissions under subpart 2 in the annual air toxics emission inventory according to part 7019.3000.

Subp. 2. Air toxics to be reported.

A. An owner or operator of an air toxics reporting facility must include HAPs as defined in part 7007.0100, subpart 12a.

B. An owner or operator of an air toxics reporting facility must include PFAS as defined in Minnesota Statutes, section 116.943, subdivision 1, paragraph (p), that are listed on the TRI list defined in part 7005.0100. An owner or operator must also include the following PFAS:

Chemical Abstracts Service (CAS) number	Pollutant
(1) 375-61-1	1,1,1,2,2,3,3,4,4,5,5-Undecafluoropentane
(2) 811-97-2	1,1,1,2-Tetrafluoroethane
(3) 420-46-2	1,1,1-Trifluoroethane
(4) 209482-18-8	1-(4-Butoxynaphthyl)tetrahydrothiophenium perfluorobutanesulfonate
(5) 120226-60-0	10:2 Fluorotelomer sulfonic acid
(6) 763051-92-9	11-Chloroperfluoro-3-oxaundecanesulfonic acid
(7) 2252-84-8	1H-Heptafluoropropane
(8) 375-17-7	1H-Nonafluorobutane
(9) 355-37-3	1H-Perfluorohexane
(10) 375-83-7	1-Hydroperfluoroheptane
(11) 2991-50-6	2-(N-Ethylperfluorooctanesulfonamido)acetic acid

(12) 2355-31-9	2-(N-Methylperfluorooctanesulfonamido)acetic acid
(13) 53826-13-4	2-(Perfluorodecyl)ethanoic acid
(14) 53826-12-3	2-(Perfluorohexyl)ethanoic acid
(15) 27854-31-5	2-(Perfluorooctyl)ethanoic acid
(16) 359-49-9	2,3,3,3-Tetrafluoropropanoic acid
(17) 914637-49-3	2H,2H,3H,3H-Perfluorooctanoic acid
(18) 70887-84-2	2H-Perfluoro-2-decenoic acid
(19) 3330-14-1	2H-Perfluoro-5-methyl-3,6-dioxanonane
(20) 812-70-4	3-(Perfluoroheptyl)propanoic acid
(21) 70887-88-6	3-(Perfluoropentyl)-3-fluoro-2-propenoic acid
(22) 356-02-5	3:3 Fluorotelomer carboxylic acid
(23) 919005-14-4	4,8-Dioxa-3H-perfluorononanoic acid
(24) 27619-93-8	4:2 Fluorotelomer sulfonate sodium
(25) 757124-72-4	4:2 Fluorotelomer sulfonic acid
(26) 27619-94-9	6:2 Fluorotelomer sulfonate sodium salt
(27) 27619-97-2	6:2 Fluorotelomer sulfonic acid
(28) 27619-96-1	8:2 Fluorotelomer sulfonate sodium salt
(29) 39108-34-4	8:2 Fluorotelomer sulfonic acid
(30) 335-65-9	8H-Perfluorooctane
(31) 1478-61-1	Bisphenol AF
(32) 75-73-0	Carbon tetrafluoride
(33) 75-45-6	Chlorodifluoromethane
(34) 75-72-9	Chlorotrifluoromethane
(35) 75-10-5	Difluoromethane
(36) 593-53-3	Fluoromethane
(37) 116-15-4	Hexafluoropropene
(38) 115-25-3	Octafluorocyclobutane

(39) 559-40-0	Octafluorocyclopentene
(40) 354-33-6	Pentafluoroethane
(41) 678-26-2	Perflenapent
(42) 756426-58-1	Perfluoro(2-((6-chlorohexyl)oxy)ethanesulfonic acid)
(43) 863090-89-5	Perfluoro(4-methoxybutanoic acid)
(44) 428-59-1	Perfluoro(methyloxirane)
(45) 113507-82-7	Perfluoro-2-ethoxyethanesulfonic acid
(46) 3330-15-2	Perfluoro-3-(1H-perfluoroethoxy)propane
(47) 151772-58-6	Perfluoro-3,6-dioxaheptanoic acid
(48) 377-73-1	Perfluoro-3-methoxypropanoic acid
(49) 355-25-9	Perfluorobutane
(50) 335-77-3	Perfluorodecanesulfonic acid
(51) 79780-39-5	Perfluorododecanesulfonic acid
(52) 76-16-4	Perfluoroethane
(53) 335-57-9	Perfluoroheptane
(54) 375-92-8	Perfluoroheptanesulfonic acid
(55) 375-85-9	Perfluoroheptanoic acid
(56) 355-42-0	Perfluorohexane
(57) 68259-12-1	Perfluorononanesulfonic acid
(58) 307-34-6	Perfluorooctane
(59) 754-91-6	Perfluorooctanesulfonamide
(60) 2706-91-4	Perfluoropentanesulfonic acid
(61) 2706-90-3	Perfluoropentanoic acid
(62) 76-19-7	Perfluoropropane
(63) 365971-87-5	Perfluorotetradecanoate
(64) 72629-94-8	Perfluorotridecanoic acid
(65) 2058-94-8	Perfluoroundecanoic acid,

(66) 83329-89-9	Potassium 11-chloroeicosafluoro-3-oxaundecane-1-sulfonate
(67) 335-24-0	Potassium perfluoro-4-ethylcyclohexanesulfonate
(68) 2923-16-2	Potassium trifluoroacetate
(69) 2250081-67-3	Sodium 4,8-dioxa-3H-perfluorononanoate
(70) 2806-15-7	Sodium perfluorodecanesulfonate
(71) 1260224-54-1	Sodium perfluorododecanesulfonate
(72) 21934-50-9	Sodium perfluoroheptanesulfonate
(73) 4021-47-0	Sodium perfluorooctanesulfonate
(74) 116-14-3	Tetrafluoroethylene
(75) 75-69-4	Trichlorofluoromethane
(76) 75-46-7	Trifluoromethane
(77) 1493-13-6	Trifluoromethanesulfonic acid
(78) 144317-44-2	Triphenylsulfonium nonafluorobutanesulfonate

C. An owner or operator of an air toxics reporting facility must include the air toxics included in subitems (1) to (66). For all pollutant names that contain the word "compounds," any chemical substance that contains the named chemical as part of that chemical's infrastructure is included.

Chemical Abstracts Service (CAS) number	Pollutant
(1) 540-59-0	1,2-Dichloroethylene
(2) 5131-66-8	1-Butoxy-2-propanol
(3) 563-47-3	3-Chloro-2-methyl-1-propene
(4) 67-64-1	Acetone
(5)	Aldehyde
(6) 309-00-2	Aldrin
(7)	Aluminum compounds
(8) 140-57-8	Aramite
(9) 12674-11-2	Aroclor 1016
(10) 12672-29-6	Aroclor 1248

(11) 11097-69-1	Aroclor 1254
(12) 1912-24-9	Atrazine
(13) 103-33-3	Azobenzene
(14) 100-52-7	Benzaldehyde
(15) 108-86-1	Bromobenzene
(16) 85-68-7	Benzyl butyl phthalate
(17) 105-60-2	Caprolactam
(18) 1306-38-3	Ceric oxide
(19) 12789-03-6	Technical chlordane
(20) 10049-04-4	Chlorine dioxide
(21) 75-68-3	1-Chloro-1,1-difluoroethane
(22) 75-45-6	Chlorodifluoromethane
(23) 10061-01-5	(Z)-Dichloropropene
(24)	Copper compounds
(25) 123-73-9	(E)-Crotonaldehyde
(26) 110-82-7	Cyclohexane
(27) 25321-22-6	Dichlorobenzene
(28) 95-50-1	1,2-Dichlorobenzene
(29) 541-73-1	1,3-Dichlorobenzene
(30) 75-71-8	Dichlorodifluoromethane
(31) 50-29-3	DDT
(32) 156-59-2	(Z)-1,2-Dichloroethylene
(33) 156-60-5	(E)-1,2-Dichloroethylene
(34) 77-73-6	Dicyclopentadiene
(35) 117-84-0	Di-n-octyl phthalate
(36) 637-92-3	Ethyl t-butyl ether
(37) 111-76-2	2-Butoxyethanol
(38) 64-18-6	Formic acid

(39) 591-78-6	2-Hexanone
(40) 7783-06-4	Hydrogen sulfide
(41) 1318-09-8	Amphibole-group minerals
(42) 78-93-3	Methyl ethyl ketone
(43) 2385-85-5	Mirex
(44) 71-36-3	1-Butanol
(45) 123-72-8	Butyraldehyde
(46) 7697-37-2	Nitric acid
(47) 55-18-5	N-Nitroso-diethylamine
(48) 924-16-3	N-Nitroso-di-butylamine
(49) 930-55-2	N-Nitroso-pyrrolidine
(50) 40487-42-1	Pendimethalin
(51) 115-07-1	1-Propene
(52) 107-98-2	1-Methoxy-2-propanol
(53) 7631-86-9	Silica
(54) 7664-93-9	Sulfuric acid
(55) 540-88-5	tert-Butyl acetate
(56) 75-65-0	tert-Butyl alcohol
(57) 109-99-9	Tetrahydrofuran
(58) 62-56-6	Thiourea
(59) 26471-62-5	Toluene diisocyanate
(60) 10061-02-6	trans-1,3-Dichloropropene
(61) 96-18-4	1,2,3-Trichloropropane
(62) 526-73-8	1,2,3-Trimethylbenzene
(63) 95-63-6	1,2,4-Trimethylbenzene
(64) 108-67-8	1,3,5-Trimethylbenzene,
(65)	Vanadium compounds
(66)	Zinc compounds

Subp. 3. De minimis reporting; exceptions.

A. For facilities calculating and reporting using material balance according to part 7019.3060 or 7019.3065 and except as provided in item B, if a toxic chemical is present in a mixture of chemicals at an air toxics reporting facility and the toxic chemical is in a concentration in the mixture that is below one percent of the mixture according to the safety data sheet (SDS) or is below 0.1 percent of the mixture in the case of a toxic chemical that is a carcinogen or potential carcinogen, an owner or operator is not required to consider the quantity of the toxic chemical present in such mixture when calculating and reporting emissions. The sources listed in subitems (1) to (3) establish a chemical as a carcinogen or potential carcinogen and are incorporated by reference.

(1) *Report on Carcinogens*, National Toxicology Program, United States Department of Health and Human Services (15th edition and subsequent editions). The report is not subject to frequent change and is available on the website of the National Institute of Environmental Health Sciences (<https://www.niehs.nih.gov>);

(2) *IARC Monographs on the Identification of Carcinogenic Hazards to Humans*, International Agency for Research on Cancer (volumes 1 to 134 and as subsequently added). The monographs are subject to frequent change and are available on the website of the International Agency for Research on Cancer (<https://monographs.iarc.who.int/monographs-available>); or

(3) Code of Federal Regulations, title 29, part 1910, subpart Z, Toxic and Hazardous Substances, Occupational Safety and Health Administration.

B. An owner or operator of an air toxics reporting facility must report all emissions of the air toxics in subitems (1) to (20). The de minimis standard under item A does not apply. For all pollutant names that contain the word "compounds," any chemical substance that contains the named chemical as part of that chemical's infrastructure is included. For facilities calculating and reporting emissions using material balance according to parts 7019.3060 and 7019.3065, only pollutants listed on the SDS need to be considered. For example, if an SDS lists an air toxic in a mixture at less than 0.1 percent, the facility must use 0.1 percent to calculate and report emissions, unless a specific amount has been certified by the supplier or previously determined by an approved reference methodology as provided under part 7019.3060.

Chemical Abstracts Service (CAS) number	Pollutant
(1) 309-00-2	Aldrin
(2)	Arsenic compounds
(3)	Cadmium compounds
(4) 57-74-9	Chlordane
(5)	Chromium compounds
(6)	Cobalt compounds
(7)	Dioxins/furans

(8) 75-21-8	Ethylene oxide
(9) 76-44-8	Heptachlor
(10) 118-74-1	Hexachlorobenzene
(11)	Lead compounds
(12)	Mercury compounds
(13) 72-43-5	Methoxychlor
(14)	Nickel compounds
(15)	Polycyclic organic matter (POMs)
(16) 40487-42-1	Pendimethalin
(17)	PFAS under subpart 2, item B
(18)	Polychlorinated biphenyl (PCBs)
(19) 8001-35-2	Toxaphene
(20) 1582-09-8	Trifluralin

Subp. 4. Calculating actual emissions.

A. An owner or operator of an air toxics reporting facility, except any facility permitted under part 7007.1125, registration permit option C, must calculate actual air toxics emissions using the methods in part 7019.3030, subpart 1, for the annual air toxics emission report.

B. An owner or operator of an air toxics reporting facility permitted under part 7007.1125, registration permit option C, must calculate emissions using the methods in part 7019.3020, subpart 5.

Subp. 5. Recordkeeping.

A. An owner or operator of an air toxics reporting facility must maintain records according to this subpart for five years after the date the air toxics emission inventory is submitted and must provide the records, upon request, to the commissioner.

B. An owner or operator must maintain a record of the SDS or vendor certification of air toxics content for each air-toxics-containing material purchased or used.

C. If an owner or operator assumes a reduction of air toxics emissions due to recycling or disposing of material off site, the owner or operator must keep records of the amount of disposed material, the amount of material shipped off site for recycling, and the calculations done to determine the amount to subtract. Acceptable records are the SDS, invoices, shipping papers, and hazardous waste manifests.

D. An owner or operator must maintain a record of the calculation for each air toxic emitted.

Statutory Authority: *MS s 116.062; 116.07*

History: *50 SR 365*

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