7007.1147 CAPPED PERMIT CALCULATION OF ACTUAL EMISSIONS.

Subpart 1. **Methods used.** The owner or operator of a stationary source may use a calculation worksheet provided by the commissioner for calculating actual emissions under this part that is based on the calculation methods in subparts 2 to 6 or may use the calculation methods under subparts 2 to 6. The owner or operator must calculate actual emissions for each material or fuel used in each emissions unit, except that similar emissions units may be aggregated for emission calculation purposes. The owner or operator of a stationary source must use the calculation method in subpart 2 if the data described in subpart 2 are available for an emissions unit. The owner or operator must use the calculation method in subpart 3 if the data described in subpart 3 are available, unless data described in subpart 2 are available. The alternative methods described in subparts 4, 5, and 6 may be used by the owner or operator without advance notification to the commissioner. The commissioner shall reject data submitted using the methods described in subparts 2 to 6 if the conditions set forth for the method are not fully met. To prevent double counting of emissions, the owner or operator must select one calculation method under this subpart for each emissions unit at the stationary source. Fugitive dust emissions from activities listed in part 7007.1300, subpart 3, item J, must be included in the calculations under this subpart only if the stationary source is in a category listed in part 7007.0200, subpart 2, item B, subitems (1) to (27).

Subp. 2. **Continuous emission monitor data.** If the owner or operator of the stationary source has collected emissions data through use of a continuous emission monitor (CEM) in compliance with the preconditions in items A and B, the owner or operator shall use the CEM data to calculate actual emissions, the calculation must be based on all of the CEM data, and the following requirements must be met:

A. the CEM has been certified by the commissioner;

B. the CEM data have not been rejected by the commissioner due to failure by the owner or operator to comply with all requirements of parts 7017.1002 to 7017.1220, parts 7007.1140 to 7007.1148, and any other applicable state or federal laws pertaining to CEM operation;

C. the total operating time of the applicable emissions unit and the total operating time of the CEM for the previous 12 consecutive months must be included in the permit application and in the monthly records required in part 7007.1146, subpart 2, item H; and

D. an explanation of how the emissions were calculated based on the CEM data must be included in the permit application and in the monthly records required in part 7007.1146. Except for facilities subject to part 7017.1020, for periods when the CEM is down and the emissions unit is operating, missing emissions data shall 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 shall be calculated using performance test data as specified in subpart 3, or 4 if data is not available under subpart 3.

Subp. 3. **Performance test data.** Emission factors from performance tests may be used for the calculation of actual emissions, provided that the performance tests met all the requirements of parts 7017.2001 to 7017.2060, and all other applicable state rules and federal regulations governing performance tests, except that alternative control efficiencies shall only be developed from performance tests conducted using control equipment listed in part 7011.0070. To use emission factors from performance tests, the owner or operator must conduct the performance test under worst case conditions, as defined in part 7017.2005, subpart 8. The owner or operator of a stationary source that uses an emission factor developed from a performance test shall use the calculation method under subpart 4. Any emission factor for VOC that is derived from a performance test must reflect, to the satisfaction of the commissioner, the actual mass of VOC compounds emitted.

Subp. 4. **General calculation method.** All calculations of actual emissions required under this part shall be based on the stationary source's operating parameters, and must use the following equation:

E = OP x UEF x [1-CE] where:

E = actual emissions in tons per year.

OP = operating parameter as required by the uncontrolled emission factor (hours of operation, fuel purchased or used, quality of material handled or throughput, or product produced).

UEF = uncontrolled emission factor (pounds of pollutant per hour of operation or units produced) as defined in part 7005.0100, subpart 10a, for uncontrolled emissions.

CE = control efficiency (percent expressed as a decimal fraction of 1.00) determined according to part 7011.0070 for listed control equipment.

Subp. 5. **Material balance method.** A material balance method may be used to calculate actual emissions. The owner or operator of a stationary source that uses material balance to calculate actual emissions shall determine total actual emissions (E) using the following equation:

E = (a-b-c) x (1-d), where:

a = the amount of the relevant pollutant, such as VOC, particulate matter, or HAP, entering the process. A signed statement from the supplier or the material safety data sheet (MSDS) must be submitted stating the maximum amount of the pollutant in any material

that was used in the process. If a material content range is given on the MSDS or by the supplier, the highest number in the range shall be used for this calculation.

b = the amount of the relevant pollutant incorporated permanently into the product. This includes VOCs chemically transformed in production. It does not include latent VOC remaining in the product that will at some time be released to the atmosphere. It also includes any solids transferred to the product during a coating operation. Technical justification for this calculation must also be submitted.

c = the amount of the relevant pollutant, if any, leaving the process as waste, or otherwise not incorporated into the product and not emitted to the air and the technical justification for this calculation. If the actual amount of the relevant pollutant in the waste is unknown, then c = 0.

d = the control efficiency (percent expressed as a decimal fraction of 1.00) determined according to part 7011.0070.

Subp. 6. **Fuel sulfur data.** The owner or operator of a stationary source may determine sulfur dioxide actual emissions by measuring the sulfur content of the fuel and assuming that all of the sulfur in the fuel is oxidized to sulfur dioxide. The sulfur content of each batch of fuel received must be certified by the supplier or an independent laboratory. The sulfur content shall be determined using American Society for Testing and Materials (ASTM) methods. The sulfur dioxide actual emissions shall be determined by using the following equation:

SO_2 = %S/100 x F/2,000 x 2, where:

SO_2 = Sulfur dioxide emissions from a batch of fuel in tons.

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

F = Amount of fuel burned by weight in pounds.

2,000 = Pounds per ton.

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

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

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