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(i) Whether the content of the plan includes all of the information specified in paragraph (d)(2) of this section; and

(ii) Whether the plan or permit application presents sufficient information to determine that compliance will be achieved and maintained.

(4) *Prohibitions.* The applicable regulatory authority shall not approve an implementation plan or permit application containing any of the following provisions:

(i) Any averaging between emissions of differing pollutants or between differing sources. Emission averaging shall not be allowed between TF and POM, and emission averaging shall not be allowed between potlines and bake furnaces;

(ii) The inclusion of any emission source other than an existing potline or existing anode bake furnace or the inclusion of any potline or anode bake plant not subject to the same operating permit;

(iii) The inclusion of any potline or anode bake furnace while it is shut down; or

(iv) The inclusion of any periods of startup, shutdown, or malfunction, as described in the startup, shutdown, and malfunction plan required by § 63.850(c), in the emission calculations.

(5) *Term.* Following review, the applicable regulatory authority shall approve the plan or permit application, request changes, or request additional information. Once the applicable regulatory authority receives any additional information requested, the applicable regulatory authority shall approve or disapprove the plan or permit application within 120 days.

(i) The applicable regulatory authority shall approve the plan for the term of the operating permit;

(ii) To revise the plan prior to the end of the permit term, the owner or operator shall submit a request to the applicable regulatory authority; and

(iii) The owner or operator may submit a request to the applicable regulatory authority to implement emission averaging after the applicable compliance date.

(6) *Operation.* While operating under an approved implementation plan, the owner or operator shall monitor the

operating parameters of each control system, keep records, and submit periodic reports as required for each source subject to this subpart.

§ 63.847 Compliance provisions.

(a) *Compliance dates.* The owner or operator of a primary aluminum plant must comply with the requirements of this subpart by:

(1) October 7, 1999, for an owner or operator of an existing plant or source;

(2) October 9, 2000, for an existing source, provided the owner or operator demonstrates to the satisfaction of the applicable regulatory authority that additional time is needed to install or modify the emission control equipment;

(3) October 8, 2001, for an existing source that is granted an extension by the regulatory authority under section 112(i)(3)(B) of the Act; or

(4) Upon startup, for an owner or operator of a new or reconstructed source.

(b) *Test plan.* The owner or operator shall prepare a site-specific test plan prior to the initial performance test according to the requirements of § 63.7(c) of this part. The test plan must include procedures for conducting the initial performance test and for subsequent performance tests required in § 63.848 for emission monitoring. In addition to the information required by § 63.7, the test plan shall include:

(1) Procedures to ensure a minimum of three runs are performed annually for the primary control system for each source;

(2) For a source with a single control device exhausted through multiple stacks, procedures to ensure that at least three runs are performed annually by a representative sample of the stacks satisfactory to the applicable regulatory authority;

(3) For multiple control devices on a single source, procedures to ensure that at least one run is performed annually for each control device by a representative sample of the stacks satisfactory to the applicable regulatory authority;

(4) Procedures for sampling single stacks associated with multiple anode bake furnaces;

(5) For plants with roof scrubbers, procedures for rotating sampling among the scrubbers or other procedures to obtain representative samples as approved by the applicable regulatory authority;

(6) For a VSS1 potline, procedures to ensure that one fan (or one scrubber) per potline is sampled for each run;

(7) For a SWPB potline, procedures to ensure that the average of the sampling results for two fans (or two scrubbers) per potline is used for each run; and

(8) Procedures for establishing the frequency of testing to ensure that at least one run is performed before the 15th of the month, at least one run is performed after the 15th of the month, and that there are at least 6 days between two of the runs during the month, or that secondary emissions are measured according to an alternate schedule satisfactory to the applicable regulatory authority.

(c) *Performance test dates.* Following approval of the site-specific test plan, the owner or operator must conduct a performance test to demonstrate initial compliance according to the procedures in paragraph (d) of this section. If a performance test has been conducted on the primary control system for potlines or for the anode bake furnace within the 12 months prior to the compliance date, the results of that performance test may be used to demonstrate initial compliance. The owner or operator must conduct the performance test:

(1) During the first month following the compliance date for an existing potline (or potroom group) or anode bake furnace;

(2) By the date determined according to the requirements in paragraph (c)(2)(i), (ii), or (iii) of this section for a new or reconstructed potline, anode bake furnace, or pitch storage tank (for which the owner or operator elects to conduct an initial performance test):

(i) By the 180th day following startup for a potline or potroom group. The 180-day period starts when the first pot in a potline or potroom group is energized.

(ii) By the 45th day from the start of the second anode bake cycle (but no

later than the 180th day from the start-up of the anode bake furnace).

(iii) By the 30th day following startup for a pitch storage tank. The 30-day period starts when the tank is first used to store pitch.

(3) By the date determined according to the requirements in paragraph (c)(3)(i) or (ii) of this section for an existing potline or anode bake furnace that was shut down at the time compliance would have otherwise been required and is subsequently restarted:

(i) By the 180th day following startup for a potline or potroom group. The 180-day period starts when the first pot in a potline or potroom group is energized.

(ii) By the 45th day from the start of the second anode bake cycle (but no later than the 180th day from the start-up of the anode bake furnace).

(d) *Performance test requirements.* The initial performance test and all subsequent performance tests shall be conducted in accordance with the requirements of the general provisions in subpart A of this part, the approved test plan, and the procedures in this section.

(1) *TF emissions from potlines.* For each potline, the owner or operator shall measure and record the emission rate of TF exiting the outlet of the primary control system for each potline and the rate of secondary emissions exiting through each roof monitor, or for a plant with roof scrubbers, exiting through the scrubbers. Using the equation in paragraph (e)(1) of this section, the owner or operator shall compute and record the average of at least three runs each month for secondary emissions and at least three runs each year for the primary control system to determine compliance with the applicable emission limit. Compliance is demonstrated when the emission rate of TF is equal to or less than the applicable emission limit in §§ 63.843, 63.844, or 63.846.

(2) *POM emissions from Soderberg potlines.* For each Soderberg (HSS, VSS1, and VSS2) potline, the owner or operator shall measure and record the emission rate of POM exiting the primary emission control system and the rate of secondary emissions exiting through each roof monitor, or for a

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plant with roof scrubbers, exiting through the scrubbers. Using the equation in paragraph (e)(2) of this section, the owner or operator shall compute and record the average of at least three runs each quarter (one run per month) for secondary emissions and at least three runs each year for the primary control system to determine compliance with the applicable emission limit. Compliance is demonstrated when the emission rate of POM is equal to or less than the applicable emission limit in §§ 63.843, 63.844, or 63.846.

(3) *Previous control device tests.* If the owner or operator has performed more than one test of primary emission control device(s) for a potline or for a bake furnace during the previous consecutive 12 months, the average of all runs performed in the previous 12-month period shall be used to determine the contribution from the primary emission control system.

(4) *TF and POM emissions from anode bake furnaces.* For each anode bake furnace, the owner or operator shall measure and record the emission rate of TF and POM exiting the exhaust stacks(s) of the primary emission control system for each anode bake furnace. Using the equations in paragraphs (e)(3) and (e)(4) of this section, the owner or operator shall compute and record the average of at least three runs each year to determine compliance with the applicable emission limits for TF and POM. Compliance is demonstrated when the emission rates of TF and POM are equal to or less than the applicable TF and POM emission limits in §§ 63.843, 63.844, or 63.846.

(e) *Equations.* The owner or operator shall determine compliance with the applicable TF and POM emission limits using the following equations and procedures:

(1) Compute the emission rate (E_p) of TF from each potline using Equation 1:

$$E_p = \frac{[(C_{s1} \times Q_{sd})_1 + (C_{s2} \times Q_{sd})_2]}{(P \times K)} \quad \text{(Equation 1)}$$

Where:

E_p =emission rate of TF from a potline, kg/Mg (lb/ton);

C_{s1} =concentration of TF from the primary control system, mg/dscm (mg/dscf);

Q_{sd} =volumetric flow rate of effluent gas corresponding to the appropriate subscript location, dscm/hr (dscf/hr);

C_{s2} =concentration of TF as measured for roof monitor emissions, mg/dscm (mg/dscf);

P =aluminum production rate, Mg/hr (ton/hr);

K =conversion factor, 10^6 mg/kg (453.600 mg/lb);

$_1$ = subscript for primary control system effluent gas; and

$_2$ = subscript for secondary control system or roof monitor effluent gas.

(2) Compute the emission rate of POM from each potline using Equation 1,

Where:

E_p = emission rate of POM from the potline, kg/mg (lb/ton); and

C_s = concentration of POM, mg/dscm (mg/dscf). POM emission data collected during the installation and startup of a cathode shall not be included in C_s .

(3) Compute the emission rate (E_b) of TF from each anode bake furnace using Equation 2,

$$E_b = \frac{(C_s \times Q_{sd})}{(P_b \times K)} \quad \text{(Equation 2)}$$

Where:

E_b = emission rate of TF, kg/mg (lb/ton) of green anodes produced;

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C_s = concentration of TF, mg/dscm (mg/dscf);
 Q_{sd} = volumetric flow rate of effluent gas, dscm/hr (dscf/hr);

P_b = quantity of green anode material placed in the furnace, mg/hr (ton/hr); and

K = conversion factor, 10^6 mg/kg (453,600 mg/lb).

(4) Compute the emission rate of POM from each anode bake furnace using Equation 2,

Where:

C_s = concentration of POM, mg/dscm (mg/dscf).

(5) Determine the weight of the aluminum tapped from the potline and the weight of the green anode material placed in the anode bake furnace using the monitoring devices required in §63.848(j).

(6) Determine the aluminum production rate (P) by dividing the number of hours in the calendar month into the weight of aluminum tapped from the potline during the calendar month that includes the three runs of a performance test.

(7) Determine the rate of green anode material introduced into the furnace by dividing the number of operating hours in the calendar month into the weight of green anode material used during the calendar month in which the performance test was conducted.

(f) *Paste production plants.* Initial compliance with the standards for existing and new paste production plants in §§63.843(b) and 63.844(b) will be demonstrated through site inspection(s) and review of site records by the applicable regulatory authority.

(g) *Pitch storage tanks.* The owner or operator shall demonstrate initial compliance with the standard for pitch storage tanks in §63.844(d) by preparing a design evaluation or by conducting a performance test. The owner or operator shall submit for approval by the regulatory authority the information specified in paragraph (g)(1) of this section, along with the information specified in paragraph (g)(2) of this section where a design evaluation is performed or the information specified in paragraph (g)(3) of this section where a performance test is conducted.

(1) A description of the parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the

criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed; and

(2) Where a design evaluation is performed, documentation demonstrating that the control device used achieves the required control efficiency during reasonably expected maximum filling rate. The documentation shall include a description of the gas stream that enters the control device, including flow and POM content under varying liquid level conditions, and the information specified in paragraphs (g)(2)(i) through (g)(2)(vi) of this section, as applicable.

(i) If the control device receives vapors, gases, or liquids, other than fuels, from emission points other than pitch storage tanks, the efficiency demonstration is to include consideration of all vapors, gases, and liquids, other than fuels, received by the control device;

(ii) If an enclosed combustion device with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C (1,400 °F) is used to meet the emission reduction requirement specified in §83.844(d), documentation that those conditions exist is sufficient to meet the requirements of §83.844(d);

(iii) Except as provided in paragraph (g)(2)(ii) of this section, for thermal incinerators, the design evaluation shall include the autoignition temperature of the organic HAP, the flow rate of the organic HAP emission stream, the combustion temperature, and the residence time at the combustion temperature;

(iv) If the pitch storage tank is vented to the emission control system installed for control of emissions from the paste production plant pursuant to §63.843(b), documentation of compliance with the requirements of §63.843(b) is sufficient to meet the requirements of §63.844(d);

(v) For carbon adsorbers, the design evaluation shall include the affinity of the organic vapors for carbon, the amount of carbon in each bed, the number of beds, the humidity of the feed gases, the temperature of the feed gases, the flow rate of the organic HAP emission stream, and if applicable, the desorption schedule, the regeneration stream pressure or temperature, and

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the flow rate of the regeneration stream. For vacuum desorption, the pressure drop shall be included; and

(vi) For condensers, the design evaluation shall include the final temperature of the organic HAP vapors, the type of condenser, and the design flow rate of the organic HAP emission stream.

(3) If a performance test is conducted, the owner or operator shall determine the control efficiency for POM during tank loading using Method 315 in appendix A to this part. The owner or operator shall include the following information:

(i) Identification of the pitch storage tank and control device for which the performance test will be submitted; and

(ii) Identification of the emission point(s) that share the control device with the pitch storage tank and for which the performance test will be conducted.

(h) *Selection of monitoring parameters.* The owner or operator shall determine the operating limits and monitoring frequency for each control device that is to be monitored as required in § 63.848(f).

(1) For potlines and anode bake furnaces, the owner or operator shall determine upper and/or lower operating limits, as appropriate, for each monitoring device for the emission control system from the values recorded during each of the runs performed during the initial performance test and from historical data from previous performance tests conducted by the methods specified in this subpart.

(2) For a paste production plant, the owner or operator shall specify and provide the basis or rationale for selecting parameters to be monitored and the associated operating limits for the emission control device.

(3) The owner or operator may redetermine the upper and/or lower operating limits, as appropriate, based on historical data or other information and submit an application to the applicable regulatory authority to change the applicable limit(s). The redetermined limits shall become effective

upon approval by the applicable regulatory authority.

[62 FR 52407, Oct. 7, 1997, as amended at 70 FR 66284, Nov. 2, 2005]

§ 63.848 Emission monitoring requirements.

(a) *TF emissions from potlines.* Using the procedures in § 63.847 and in the approved test plan, the owner or operator shall monitor emissions of TF from each potline by conducting monthly performance tests. The owner or operator shall compute and record the monthly average from at least three runs for secondary emissions and the previous 12-month average of all runs for the primary control system to determine compliance with the applicable emission limit. The owner or operator must include all valid runs in the monthly average. The duration of each run for secondary emissions must represent a complete operating cycle.

(b) *POM emissions from Soderberg potlines.* Using the procedures in § 63.847 and in the approved test plan, the owner or operator shall monitor emissions of POM from each Soderberg (HSS, VSS1, and VSS2) potline every three months. The owner or operator shall compute and record the quarterly (3-month) average from at least one run per month for secondary emissions and the previous 12-month average of all runs for the primary control systems to determine compliance with the applicable emission limit. The owner or operator must include all valid runs in the quarterly (3-month) average. The duration of each run for secondary emissions must represent a complete operating cycle. The primary control system must be sampled over an 8-hour period, unless site-specific factors dictate an alternative sampling time subject to the approval of the regulatory authority.

(c) *TF and POM emissions from anode bake furnaces.* Using the procedures in § 63.847 and in the approved test plan, the owner or operator shall monitor TF and POM emissions from each anode bake furnace on an annual basis. The owner or operator shall compute and record the annual average of TF and POM emissions from at least three runs to determine compliance with the applicable emission limits. The owner