Title 40: Protection of Environment

PART 60—STANDARDS OF PERFORMANCE FOR NEW STATIONARY SOURCES

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Subpart T—Standards of Performance for the Phosphate Fertilizer Industry: Wet-Process Phosphoric Acid Plants

§ 60.200 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each wet-process phosphoric acid plant having a design capacity of more than 15 tons of equivalent P_2O_5feed per calendar day. For the purpose of this subpart, the affected facility includes any combination of: reactors, filters, evaporators, and hot wells.

(b) Any facility under paragraph (a) of this section that commences construction or modification after October 22, 1974, is subject to the requirements of this subpart.

[42 FR 37937, July 25, 1977, as amended at 48 FR 7129, Feb. 17, 1983]

§ 60.201 Definitions.

As used in this subpart, all terms not defined herein shall have the meaning given them in the Act and in subpart A of this part.

(a) *Wet-process phosphoric acid plant* means any facility manufacturing phosphoric acid by reacting phosphate rock and acid.

(b) *Total fluorides* means elemental fluorine and all fluoride compounds as measured by reference methods specified in §60.204, or equivalent or alternative methods.

(c) *Equivalent* P_2O_5 *feed* means the quantity of phosphorus, expressed as phosphorus pentoxide, fed to the process.

[40 FR 33154, Aug. 6, 1975, as amended at 65 FR 61757, Oct. 17, 2000]

§ 60.202 Standard for fluorides.

(a) On and after the date on which the performance test required to be conducted by §60.8 is completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected facility any gases which contain total fluorides in excess of 10.0 g/Mg of equivalent P_2O_5feed (0.020 lb/ton).

[40 FR 33154, Aug. 6, 1975, as amended at 65 FR 61757, Oct. 17, 2000]

§ 60.203 Monitoring of operations.

(a) The owner or operator of any wet-process phosphoric acid plant subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring device which can be used to determine the mass flow of phosphorus-bearing feed material to the process. The monitoring device shall have an accuracy of ±5 percent over its operating range.

(b) The owner or operator of any wet-process phosphoric acid plant shall maintain a daily record of equivalent P_2O_5feed by first determining the total mass rate in Mg/hr of phosphorus bearing feed using a monitoring device for measuring mass flowrate which meets the requirements of paragraph (a) of this section and then by proceeding according to §60.204(b)(3).

(c) The owner or operator of any wet-process phosphoric acid subject to the provisions of this part shall install, calibrate, maintain, and operate a monitoring device which continuously measures and permanently records the total pressure drop across the process scrubbing system. The monitoring device shall have an accuracy of ±5 percent over its operating range.

[40 FR 3154, Aug. 6, 1975, as amended at 54 FR 6669, Feb. 14, 1989; 65 FR 61757, Oct. 17, 2000]

§ 60.204 Test methods and procedures.

(a) In conducting the performance tests required in §60.8, the owner or operator shall use as reference methods and procedures the test methods in appendix A of this part or other methods and procedures as specified in this section, except as provided in §60.8(b).

(b) The owner or operator shall determine compliance with the total fluorides standard in §60.202 as follows:

(1) The emission rate (E) of total fluorides shall be computed for each run using the following equation:

$$E = \left(\sum_{i=1}^{N} C_{si} Q_{sdi} \right) / (PK)$$

where:

E=emission rate of total fluorides, g/Mg (lb/ton) of equivalent P_2O_5feed.

C_{si}=concentration of total fluorides from emission point "i," mg/dscm (gr/dscf).

Q_{sdi}=volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N=number of emission points associated with the affected facility.

P=equivalent P_2O_5feed rate, Mg/hr (ton/hr).

K=conversion factor, 1000 mg/g (7,000 gr/lb).

(2) Method 13A or 13B shall be used to determine the total fluorides concentration (C_{si}) and volumetric flow rate (Q_{sdi}) of the effluent gas from each of the emission points. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The equivalent P_2O_5feed rate (P) shall be computed for each run using the following equation:

$P=M_pR_p$

where:

M_p=total mass flow rate of phosphorus-bearing feed, Mg/hr (ton/hr).

R_p=P_2O_5content, decimal fraction.

(i) The accountability system of §60.203(a) shall be used to determine the mass flow rate (M_p) of the phosphorus-bearing feed.

(ii) The Association of Official Analytical Chemists (AOAC) Method 9 (incorporated by reference—see §60.17) shall be used to determine the P_2O_5content (R_p) of the feed.

[54 FR 6669, Feb. 14, 1989, as amended at 65 FR 61757, Oct. 17, 2000]