

## Environmental Protection Agency

## § 60.223

E=emission rate of total fluorides, g/Mg (lb/ton) of equivalent  $P_2O_5$  feed.

$C_{si}$ =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  $P_2O_5$  feed 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  $P_2O_5$  feed rate (P) shall be computed for each run using the following equation:

$$P = M_p R_p$$

where:

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

$R_p$ = $P_2O_5$  content, decimal fraction.

(i) The accountability system of § 60.213(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  $P_2O_5$  content ( $R_p$ ) of the feed.

[54 FR 6670, Feb. 14, 1989, as amended at 65 FR 61757, Oct. 17, 2000]

### Subpart V—Standards of Performance for the Phosphate Fertilizer Industry: Diammonium Phosphate Plants

#### § 60.220 Applicability and designation of affected facility.

(a) The affected facility to which the provisions of this subpart apply is each granular diammonium phosphate plant having a design capacity of more than 15 tons of equivalent  $P_2O_5$  feed per calendar day. For the purpose of this subpart, the affected facility includes any combination of: reactors, granulators, dryers, coolers, screens, and mills.

(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 37938, July 25, 1977, as amended at 48 FR 7129, Feb. 17, 1983]

#### § 60.221 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) *Granular diammonium phosphate plant* means any plant manufacturing granular diammonium phosphate by reacting phosphoric acid with ammonia.

(b) *Total fluorides* means elemental fluorine and all fluoride compounds as measured by reference methods specified in § 60.224, 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 33155, Aug. 6, 1975]

#### § 60.222 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 30 g/megagram (Mg) of equivalent  $P_2O_5$  feed (0.060 lb/ton).

[40 FR 33155, Aug. 6, 1975, as amended at 65 FR 61757, Oct. 17, 2000]

#### § 60.223 Monitoring of operations.

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

(b) The owner or operator of any granular diammonium phosphate plant shall maintain a daily record of equivalent  $P_2O_5$  feed by first determining the total mass rate in Mg/hr of phosphorus-bearing feed using a flow monitoring device meeting the requirements of paragraph (a) of this section and then

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by proceeding according to § 60.224(b)(3).

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

[40 FR 33155, Aug. 6, 1975, as amended at 54 FR 6670, Feb. 14, 1989; 65 FR 61757, Oct. 17, 2000]

**§ 60.224 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 § 60.222 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<sub>2</sub>O<sub>5</sub> feed.

C<sub>si</sub>=concentration of total fluorides from emission point "i," mg/dscm (gr/dscf).

Q<sub>sdi</sub>=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<sub>2</sub>O<sub>5</sub> feed 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<sub>si</sub>) and volumetric flow rate (Q<sub>sdi</sub>) 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<sub>2</sub>O<sub>5</sub> feed rate (P) shall be computed for each run using the following equation:

$$P = M_p R_p$$

where:

M<sub>p</sub>=total mass flow rate of phosphorus-bearing feed, Mg/hr (ton/hr).

R<sub>p</sub>=P<sub>2</sub>O<sub>5</sub> content, decimal fraction.

(i) The accountability system of § 60.223(a) shall be used to determine the mass flow rate (M<sub>p</sub>) 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<sub>2</sub>O<sub>5</sub> content (R<sub>p</sub>) of the feed.

[54 FR 6670, Feb. 14, 1989, as amended at 65 FR 61757, Oct. 17, 2000]

**Subpart W—Standards of Performance for the Phosphate Fertilizer Industry: Triple Superphosphate Plants**

**§ 60.230 Applicability and designation of affected facility.**

(a) The affected facility to which the provisions of this subpart apply is each triple superphosphate plant having a design capacity of more than 15 tons of equivalent P<sub>2</sub>O<sub>5</sub> feed per calendar day. For the purpose of this subpart, the affected facility includes any combination of: mixers, curing belts (dens), reactors, granulators, dryers, cookers, screens, mills, and facilities which store run-of-pile triple superphosphate.

(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 37938, July 25, 1977, as amended at 48 FR 7129, Feb. 17, 1983]

**§ 60.231 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) *Triple superphosphate plant* means any facility manufacturing triple superphosphate by reacting phosphate rock with phosphoric acid. A run-of-pile triple superphosphate plant includes curing and storing.

(b) *Run-of-pile triple superphosphate* means any triple superphosphate that has not been processed in a granulator and is composed of particles at least 25 percent by weight of which (when not