§ 60.214 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 §60.212 as follows:

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

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

where:

- $E =$ emission rate of total fluorides, g/Mg (lb/ton) of equivalent $P_2O_5$ feed.
- $C_{ai} =$ 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 ($C_{ai}$) 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:

$$ P = M_p \cdot R_p $$

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.


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.


§ 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...
§ 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$_2$O$_5$ feed (0.060 lb/ton).

(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:

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

where:

E = emission rate of total fluorides, g/Mg (lb/ton) of equivalent P$_2$O$_5$ 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$_2$O$_5$ 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$_2$O$_5$ feed rate (P) shall be computed for each run using the following equation:

$$ P = \frac{M_p R_p}{K} $$

where:

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

R$_p$ = P$_2$O$_5$ content, decimal fraction.

(i) The accountability system of §60.223(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$_2$O$_5$ content (R$_p$) of the feed.

§ 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).