

2.101 Normal Superphosphate Facilities

2.101.1 Applicability and Designation of Affected Facility

The provisions of this source category are applicable to each normal superphosphate manufacturing plant, which is the affected facility.

2.101.2 Test Methods and Procedures

(a) In conducting the performance tests required by Section 1.2, the owner or operator shall use as reference methods and procedures the test methods in Appendix A of this text or other methods and procedures as specified in this section, except as provided in §1.2(b).

(b) The owner or operator shall determine compliance with the total fluorides standards 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/metric ton (lbs./ton) of equivalent P₂O₅ feed.

C_{si} = concentration of total fluorides from emission point "i", mg/dscm (mg/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 P₂O₅ feed rate, metric tons/hr. (ton/hr.).

K = conversion factor, 1000 mg/g (453,600 mg/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 P₂O₅ feed rate (P) shall be computed for each run using the following equation:

$$P = Mp Rp$$

Where:

Mp = total mass flow rate of phosphorus-bearing feed, metric tons/hr. (ton/hr.).

Rp = P₂O₅ content, decimal fraction.

- (i) Determine the total mass flow rate of phosphorus-bearing feed (Mp) during each run using a mass flow monitoring device which can be calibrated to have an accuracy of ±5% over its operating range.
- (ii) The Association of Official Analytical Chemists (AOAC) Method 9 (incorporated by reference--see Section 1.6) shall be used to determine the P₂O₅ content (Rp) of the feed.