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Thursday  
June 10, 1999

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**Part II**

**Environmental  
Protection Agency**

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40 CFR Parts 9 and 63

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**National Emission Standards for  
Hazardous Air Pollutants Phosphoric Acid  
Manufacturing and Phosphate Fertilizers  
Production; Final Rule**

**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Parts 9 and 63**

[IL-64-2-5807; FRL-6329-5]

RIN 2060-AE40 and 2060-AE44

**National Emission Standards for Hazardous Air Pollutants Phosphoric Acid Manufacturing and Phosphate Fertilizers Production**

**AGENCY:** Environmental Protection Agency (Agency).

**ACTION:** Final rule.

**SUMMARY:** This action promulgates national emission standards for hazardous air pollutants (NESHAP) for new and existing major sources in phosphoric acid manufacturing and phosphate fertilizers production plants (SIC 2874). Hazardous air pollutants (HAPs) emitted by the facilities covered by this rule include hydrogen fluoride (HF); arsenic, beryllium, cadmium, chromium, manganese, mercury, and nickel (HAP metals); and methyl isobutyl ketone (MIBK). Human exposure to the HAP constituents in these emissions may be associated with adverse carcinogenic, respiratory, nervous system, dermal, developmental, and/or reproductive health effects. Implementation of the rules will achieve an emission reduction of HF estimated at 315 megagrams per year (Mg/yr) (345 tons per year [tpy]). The standards will reduce 940 Mg/yr (1035 tpy) of total fluorides and particulate matter containing heavy metals which are regulated pollutants under the Clean Air Act as amended (the Act). This action also amends 40 CFR part 9 by updating the table of currently approved information collection control numbers to include the information requirements contained in this final rule.

The standards are promulgated under the authority of section 112 of the Clean Air Act (the Act) and are based on the Administrator's determination that phosphoric acid manufacturing and phosphate fertilizers production plants may reasonably be anticipated to emit several of the 188 HAPs listed in section 112(b) of the Act from the various process operations found within the industry. The NESHAP will provide

protection to the public by requiring all phosphoric acid manufacturing and phosphate fertilizers plants that are major sources to meet emission standards reflecting the application of the maximum achievable control technology (MACT).

**DATES:** *Effective Date.* June 10, 1999. See the Supplementary Information section concerning judicial review.

*Incorporation by Reference.* The incorporation by reference of certain publications in these standards is approved by the Director of the Office of the Federal Register as of June 10, 1999.

**ADDRESSES:** *Docket.* Public Docket No. A-94-02, containing information considered by the EPA in development of the promulgated standards, is available for public inspection between 8 a.m. and 5:30 p.m., Monday through Friday at the following address in room M-1500, Waterside Mall (ground floor): U. S. Environmental Protection Agency, Air and Radiation Docket and Information Center (MC-6102), 401 M Street SW., Washington, DC 20460; telephone: (202) 260-7549. A reasonable fee may be charged for copying docket materials. For additional information on the Docket and electronic availability see **SUPPLEMENTARY INFORMATION.**

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**SUPPLEMENTARY INFORMATION:**

**Regulated Entities**

Today's rulemaking applies to process components at new and existing phosphoric acid manufacturing and phosphate fertilizers production plants. Examples of those process components are listed in the following table:

Source category	Examples
Phosphoric Acid Manufacturing .....	Wet Process Phosphoric Acid Process Line, Superphosphoric Acid Process Line, Phosphate Rock Dryer, Phosphate Rock Calciner, Purified Phosphoric Acid Process Line.
Phosphate Fertilizers Production .....	Diammonium and/or Monoammonium Phosphate Process Line, Granular Triple Superphosphate Process Line, Granular Triple Superphosphate Storage Building.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by the regulations. This table lists the types of entities that the Agency is now aware could be potentially regulated. To determine whether your facility is covered by the regulations, you should carefully examine the applicability criteria in the rules. If you have questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

### Docket and Electronic Information

The principal purposes of the docket are: (1) To allow interested parties to readily identify and locate documents so that they can intelligently and effectively participate in the rulemaking process, and (2) to serve as the record in case of judicial review. The docket index, technical support information, the economic profile of the industry (item II-A-27) and other materials related to this rulemaking are available for review in the docket center or copies may be mailed on request from the Air and Radiation Docket and Information Center by calling (202) 260-7548 or 7549. The FAX number for the Center is (202) 260-4000. The e-mail address for the Center is "a-and-r-docket@epamail.epa.gov". A reasonable fee may be charged for copying docket materials. In addition to being available in the docket, an electronic copy of today's document which includes the regulatory text is available through the Technology Transfer Network (TTN) at the Unified Air Toxics Website (UATW). Following promulgation, a copy of the rule will be posted at the TTN's policy and guidance page for newly proposed or promulgated rules (<http://www.epa.gov/ttn/oarpg/t3pfr.html>). More comprehensive information concerning the rule will be posted on the UATW ([http://www.epa.gov/ttn/uatw/7\\_10yrstds.html](http://www.epa.gov/ttn/uatw/7_10yrstds.html)). The TTN provides information and technology exchange in various areas of air pollution control. If more information on the TTN is needed, call the TTN HELP line at (919) 541-5384.

### Judicial Review

The NESHAP for new and existing major sources in phosphoric acid manufacturing and phosphate fertilizers production plants were proposed in the **Federal Register** (FR) on December 27, 1996 (61 FR 68430). This **Federal Register** action announces the EPA's final decision on the rule. Under section 307(b)(1) of the Act, judicial review of

the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit within 60 days of today's publication of this final rule. Under section 307(b)(2) of the Act, the requirements that are the subject of today's action may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

The following outline is provided to aid in reading the preamble to the final rule.

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## I. Background

### A. Background and Purpose of Standards

Section 112 of the Act requires the Agency to promulgate regulations for the control of HAP emissions from both new and existing major sources. The statute requires the regulations to reflect the maximum degree of reduction in emissions of HAPs that is achievable taking into consideration the cost of achieving the emission reduction, any nonair quality health and environmental effects, and energy requirements. This level of control is commonly referred to as the maximum achievable control technology (MACT).

Section 112 of the Act requires the Agency to establish national standards to reduce HAP emissions from major sources and certain area sources that emit one or more HAPs. Section 112(b) contains a list of HAPs to be regulated by NESHAP. Section 112(c) directs the Agency to use this pollutant list to develop and publish a list of source categories for which NESHAP will be developed and section 112(e) requires the Agency to devise a schedule for development of those NESHAP. The Agency must list all known source categories and subcategories of "major sources" that emit one or more of the listed HAPs. A major source is defined in section 112(a) as any stationary source or group of stationary sources located within a contiguous area and under common control that emits or has the potential to emit in the aggregate, considering controls, 10 tons per year or more of any one HAP or 25 tons per year or more of any combination of HAPs. This list of source categories was published in the **Federal Register** on July 16, 1992 (57 FR 31576) and includes phosphoric acid manufacturing and phosphate fertilizers production.

The control of HAPs is achieved through the promulgation of technology-based emission standards under section 112(d) and work practice standards under 112(h) for categories of sources that emit HAPs. Emission reductions may be accomplished through the application of measures, processes, methods, systems, or techniques including, but not limited to: (1) Reducing the volume of, or eliminating emissions of, such pollutants through process changes, substitution of materials, or other modifications; (2) enclosing systems or processes to eliminate emissions; (3) collecting, capturing, or treating such pollutants when released from a process, stack, storage or fugitive emissions point; (4) design, equipment, work practice, or operational standards (including

requirements for operator training or certification) as provided in subsection (h); or (5) a combination of the above. (See section 112(d)(2).) The Agency may promulgate more stringent standards at a later date if residual risk remains after the imposition of controls. (See section 112(f)(2)). Pursuant to section 112(d) of the Act, on December 27, 1996 the Agency proposed NESHAP for new and existing sources in the phosphoric acid manufacturing and phosphate fertilizers production source categories (61 FR 68430).

### B. Technical Basis of Regulation

For existing sources, section 112(d) of the Act requires that the Agency establish NESHAP which require the maximum degree of reductions achievable by available control techniques. Such standards (called "maximum achievable control technology" or "MACT") may be no less stringent than "the average emission limitation achieved by the best performing 12 percent of the existing sources (for which the Administrator has information)." In general, NESHAP are to be numerical limitations derived from the application of emissions control technologies. This level of control is commonly referred to as the MACT floor. As a starting point, the Agency gathered available data to analyze to identify the technology that could achieve the lowest emissions. Since the HAP HF was the main concern for this standard, the initial approach was focused upon determining MACT for HF. The same approach was later extended to HAP metals for subsequent analyses.

During its information collection effort regarding HF emissions, the Agency found that there is a large body of existing data for the surrogate pollutant total fluoride, which the Agency previously designated for control under § 111 of the Act through the development of new source performance standards (NSPS) and emissions guidelines (EG). The NSPS are emissions limitations for new sources based upon the best demonstrated technologies considering cost, non-air quality health and environmental impacts, and energy impacts. Given a limited amount of direct data on HF emissions and a large body of data developed to demonstrate achievement of permitted emissions which include HF as a component of total fluorides, the Agency chose to use total fluoride as a surrogate for HF in its analyses. By adopting the approach of regulating total fluoride as surrogate for HF, the Agency availed itself of information reflecting the effect of over

twenty years of implementation of NSPS and EG which are technology-based standards. The Agency obtained performance data derived from emissions tests conducted to establish compliance with emissions limitations required by NSPS and with State-permitted emissions limitations developed pursuant to EG for previously existing sources.

Performance data were analyzed for several different types and configurations of wet scrubbing devices and the data indicated that no one design achieves superior control. Further, the data were reviewed for the purpose of calculating MACT floors. Data for sources with multiple emission tests showed significant variability which tended to have as its upper bound the permitted emission limits. This was to be expected since the controls were designed and operated to achieve specific limits as reflected in permits. The permit limits were typically based upon NSPS and EG. Since the data indicated that the level of control capable of being achieved was reflected in sources' permits, the Agency elected to directly calculate floors on the basis of the permitted emission limits. So, to determine emissions limits corresponding to MACT floors, the Agency first identified the median of the top twelve percent of permits issued to sources for each process. After thus identifying the best controlled sources and establishing preliminary MACT floors, the Agency again analyzed the available test data to ascertain that the control levels of the permit limits were being achieved and to determine if greater degrees of control were actually being achieved in practice for individual processes. For sources of total fluorides, test data showed that the permitted emissions were reflective of the degree of emissions control actually being achieved.

For phosphate rock dryers and calciners, the MACT floors were established using particulate matter as a surrogate for HAP metals. For dryers, the MACT floor analysis was performed using permitted emissions of particulate matter. The available test data indicate permitted levels are being achieved. For calciners, the permits were all based upon general process rate allowances which were not developed specifically for phosphate rock calcining. In the case of calciners, there were numerous test reports for particulate matter. Test data showed that the permits do not reflect the level of emissions reductions achieved in practice. So, for calciners, the MACT analysis was based upon the test data, which consistently were lower than permitted levels.

One source manufactures a purified phosphoric acid (PPA) through a solvent extraction method. The plant emits MIBK, which is a HAP. Fugitive emissions of MIBK from valves, flanges, and seals are reduced by means of an ongoing maintenance and repair program. As the lone PPA facility in the source category, its control methods constitute the MACT floor for controlling fugitive emissions of MIBK. The MIBK cannot be emitted through a conveyance designed and constructed to capture this pollutant. Upon consideration of the fugitive nature of these emissions, the available information and the public comments received, the Agency has concluded that it is not feasible to prescribe or enforce an emission standard for control of these emissions. In section 112(h)(1), the Act provides that the Administrator may prescribe a work practice consistent with the provisions of section 112(d) in lieu of an emission standard, if it is not feasible to prescribe or enforce an emission standard for control of a HAP. In this instance, the current work practices at the plant constitute the floor level of control for PPA plants. The LDAR (leak detection and repair) provisions in 40 CFR part 63, subpart H were determined during development of the hazardous organics NESHAP to be MACT for fugitive emissions sources with similar characteristics to those of the one plant emitting MIBK. After considering all available information, especially the public comments received, the Agency has concluded that subpart H is at least equivalent to the facility's current practices and has adopted the LDAR provisions of the Hazardous Organics NESHAP (HON) as part of the MACT controls for this process.

Having thus identified the floor level of control for the different processes and pollutants of concern, the Agency then considered the possibility of setting more stringent limitations. The final rule, like the proposal, does not require facilities to achieve emission reductions more stringent than the MACT floor.

As a part of a reconsideration, the Agency first explored the possibility that different control technologies were available and demonstrated for the classes of sources being controlled by today's action. None were found that had been demonstrated and could be applied without creating additional negative impacts to other environmental media. The Agency also considered whether new source emission limits could be applied to existing sources. The emissions data showed that high levels of control were being achieved in both cases and that there was minimal

opportunity for additional significant reductions to be achieved by going from the existing-source MACT floors to the levels of new source MACT. Balanced against the minimal potential for additional reductions were the costs of retrofitting controls to plants for which emissions data showed the existence of multiple test data points near the MACT floor. As an example, the Agency previously calculated the annualized capital cost for the addition of a new wet scrubber to a model WPPA (wet process phosphoric acid) plant producing 36 tons per hour to be \$17,253 per year. Such a plant operating at the existing source MACT level which would install a new scrubber to achieve the new source MACT level would reduce HF emissions by 0.34 tons per year. So, the cost effectiveness of the additional reduction would be \$50,744 per ton of additional HF removed, which the Agency considers to be inappropriately high at this time. Thus, the Agency concludes that requiring existing sources to be controlled beyond the MACT floor would be unreasonable in terms of cost.

For new sources, section 112(d) of the Act requires that the Agency establish NESHAP which may be no less stringent than "the emission control that is achieved in practice by the best controlled similar source." For new

sources, the most stringent permit issued for any given process was adopted as MACT, except for calciners. Performance test data indicated that the most stringent permit limits were being achieved in practice. The calciners limit was based upon test data that showed an achievable level of performance exceeding the permitted requirements. Thus, MACT was set for all but one of the subcategories at the level of the most stringent permit requirements because there was no case in which more effective controls were identified.

**C. Stakeholder and Public Participation**

In the development of these standards, numerous representatives of the phosphate fertilizers industry were consulted. Industry representatives have included trade associations and producers. Representatives from other interested Agency offices, regional offices, and State environmental agencies participated in the regulatory development process as members of an informal work group. The work group was involved in the regulatory development process, and was given opportunities to review and comment on the standards before proposal and promulgation. Finally, industry representatives, regulatory authorities, and environmental groups had the opportunity to comment on the proposed standards and to provide

additional information during the public comment period that followed proposal.

The standards were proposed in the **Federal Register** on December 27, 1996 (61 FR 68430). The preamble to the proposed standards described the rationale for the proposed standards. Public comments were solicited at the time of proposal. To provide interested persons the opportunity for oral presentation of data, views, or arguments concerning the proposed standards, a public hearing was offered at proposal. However, the public did not request a hearing and, therefore, one was not held. The public comment period was from December 27, 1996 to February 25, 1997. Sixteen comment letters were received. Commenters included industry representatives, control device manufacturers, State agencies and an environmental organization. The comments were carefully considered, and changes were made in the proposed standards when determined by the Agency to be appropriate. A detailed discussion of these comments and responses can be found in Section IV of this preamble.

**II. Summary of Promulgated Standards**

The NESHAP emissions limits for existing and new sources are given in the tables below.

**EMISSIONS LIMITATIONS FOR EXISTING PHOSPHORIC ACID MANUFACTURING PLANTS AND PHOSPHATE FERTILIZERS PLANTS**

Class of source	Pollutant	Emission limit
Wet Process Phosphoric Acid Process Line	Total Fluorides .....	0.020 lb. Total Fluoride (F <sup>-</sup> ) Per Ton P <sub>2</sub> O <sub>5</sub> Feed.
Superphosphoric Acid Process Line .....	Total Fluorides .....	0.010 lb. F <sup>-</sup> Per Ton P <sub>2</sub> O <sub>5</sub> Feed.
Diammonium and/or Monoammonium Phosphate Process Line.	Total Fluorides .....	0.060 lb. F <sup>-</sup> Per Ton P <sub>2</sub> O <sub>5</sub> Feed.
Granular Triple Superphosphate Process Line.	Total Fluorides .....	0.150 lb. F <sup>-</sup> Per Ton P <sub>2</sub> O <sub>5</sub> Feed.
Granular Triple Superphosphate Storage Buildings.	Total Fluorides .....	5.0 × 10 <sup>-4</sup> lb. F <sup>-</sup> Per Hour Per Ton of P <sub>2</sub> O <sub>5</sub> Stored.
Phosphate Rock Dryers .....	Particulate Matter .....	0.2150 lb. PM Per Ton of Rock Feed.
Phosphate Rock Calciners .....	Particulate Matter .....	0.060 grains PM Per Dry Standard Cubic Foot.
Purified Phosphoric Acid Process Line .....	MIBK .....	Implement Part 63, Subpart H, Leak Detection and Repair Program.

**EMISSIONS LIMITATIONS FOR NEW PHOSPHORIC ACID MANUFACTURING PLANTS AND PHOSPHATE FERTILIZER PLANTS**

Class of source	Pollutant	Emission limit
Wet Process Phosphoric Acid Process Line	Total Fluorides .....	0.01350 lb. Total Fluoride (F <sup>-</sup> ) per ton P <sub>2</sub> O <sub>5</sub> Feed.
Superphosphoric Acid Process Line .....	Total Fluorides .....	0.00870 lb. F <sup>-</sup> per ton P <sub>2</sub> O <sub>5</sub> Feed.
Diammonium and/or Monoammonium Phosphate Process Line.	Total Fluorides .....	0.0580 lb. F <sup>-</sup> per ton P <sub>2</sub> O <sub>5</sub> Feed.
Granular Triple Superphosphate Process Line.	Total Fluorides .....	0.1230 lb. F <sup>-</sup> per ton P <sub>2</sub> O <sub>5</sub> Feed.
Granular Triple Superphosphate Storage Buildings.	Total Fluorides .....	5.0 X 10 <sup>-4</sup> lb. F <sup>-</sup> Per Hour Per Ton of P <sub>2</sub> O <sub>5</sub> Stored.
Phosphate Rock Dryers .....	Particulate Matter .....	0.060 lb. PM Per Ton of Rock Feed.
Phosphate Rock Calciners .....	Particulate Matter .....	0.040 grains PM Per Dry Standard Cubic Foot.
Purified Phosphoric Acid Process Line .....	MIBK .....	Implement Part 63, Subpart H, Leak Detection and Repair Program.

The form, but not the substance, of the standard for one subcategory has changed since proposal. In the proposal, the Agency noted that two types of superphosphoric acid process lines currently operate: a vacuum evaporation process and a submerged combustion process. These processes are quite distinct from one another and they use different feedstock. Moreover, the submerged combustion process is not amenable to the same level of control as is the vacuum evaporation process. The Agency therefore concluded that these processes should be regulated as separate subcategories under this NESHAP.

Because only one facility currently exists in the submerged combustion process subcategory, the proposal's emission standard for the subcategory consisted of the lone source identified by company name. In the final regulation, the Agency has established an emission limit for the submerged combustion process subcategory generally without reference to the specific facility. Doing so ensures that changes in the facility's name or ownership would not change the applicable emission standard.

Consistent with the proposal, the final regulation does not distinguish between process types in its establishment of new source emission limits for superphosphoric acid production. As the Agency noted at proposal, a new facility "could avail itself of the same resources as other companies in the industry" in choosing the kind of process to employ in manufacturing superphosphoric acid. (See 61 FR 68438.) Put another way, the Agency examined both vacuum evaporation process and submerged combustion process sources to identify the "best controlled similar source," which serves as the MACT floor for new sources. The Agency concluded that the MACT floor was represented by a facility employing the vacuum evaporation process. No commenter objected to this proposal and the Agency has retained it in the final regulation.

Two additional technical changes are present in the final regulation. First, the standards as proposed often referred to "plants" in defining the affected source, but the final regulation refers to "process lines." For example, the proposed standard for a "Wet Process Phosphoric Acid Plant" now refers to a "Wet Process Phosphoric Acid Process Line." Because the NSPS used the term "plant," the proposal (based in large part upon the NSPS) did as well. However, in practice, the "plant" to which the NSPS applies is indeed a single process line. EPA has chosen to

use the more specific term in the final regulation in order to promote clarity for the regulated public. The Agency is confident that this change has no effect on the stringency of the standard.

Second, the requirement that owners or operators of purified phosphoric acid process lines ensure that each product acid and raffinate stream have no more than a specified concentration of MIBK and that they ensure that the chiller stack exit gas stream remains below a given temperature has been moved from the monitoring section of the rule to its more appropriate location in the emission standard section.

An annual performance test is required to demonstrate compliance with each applicable numerical limit for total fluorides or particulate matter. The monitoring provisions require an owner or operator using a wet scrubbing device to continuously monitor the pressure drop and liquid flow rate of scrubbing devices used to control total fluorides or particulate matter. The feed rate of raw materials to the processes must also be continuously monitored. During the performance test, the owner/operator must record the scrubber pressure drop and liquid flow rate to establish baseline levels. Following the performance test, it is an operating requirement that the owner/operator must maintain scrubber pressure drop and liquid flow rate within plus or minus twenty percent of the values recorded during the performance test or within a range established upon the basis of prior successful tests. Any exceedance of the operating range averaged over 24 hours is a violation of the operating requirement.

For PPA plants that emit MIBK, the standards require implementation of a leak detection and repair program, continuous monitoring of chiller stack temperature and daily monitoring of MIBK concentrations at two points in the process.

As required by the NESHAP General Provisions (40 CFR part 63, subpart A), the owner or operator must develop and implement a startup, shutdown, and malfunction plan. Most notification, recordkeeping, and reporting requirements in the general provisions apply to phosphoric acid manufacturing and phosphate fertilizers production facilities. These include but are not limited to: (1) initial notification(s) of applicability, notification of performance test, and notification of compliance status; (2) a report of performance test results; (3) a Startup, Shutdown, and Malfunction Plan with semiannual reports of reportable events (if they occur); and (4) semiannual reports of excess emissions. If excess

emissions are reported, the owner or operator must report quarterly until a request to return the reporting frequency to semiannual is approved.

The NESHAP General Provisions also require that records be maintained for at least 5 years from the date of each record. The owner or operator must retain the records on site for at least 2 years but may retain the records off site the remaining 3 years. The files may be retained on microfilm, microfiche, on a computer, on computer disks, or on magnetic tape. Reports may be made on paper or on a labeled computer disk using commonly available and EPA-compatible computer software.

### III. Summary of Impacts

The overall effect of the rule is to raise the control performance of plants in the industry to the level achieved by the best performing plants. In addition to the health and environmental benefits associated with HAP emission reductions, benefits of this action include a decrease in site-specific levels of non-HAP pollutants and lowered occupational exposure levels for employees.

The Agency estimates that up to 550 Mg/yr (605 tpy) of HF, the predominate HAP, and other HAPs are emitted from sources at phosphoric acid manufacturing and phosphate fertilizers production plants at the current level of control. Implementing MACT-level controls is expected to reduce these HAP emissions from regulated sources by about 315 Mg/yr (345 tpy) nationwide. Plants affected by the standards are expected to achieve these reductions by upgrading or installing wet scrubbing systems.

Expected impacts to energy usage and other media are expected to be negligible. The largest possible impact will be a minor increase in liquid streams flowing to cooling ponds. Since the processes are net consumers of water, those flows will be recycled to the processes.

The nationwide capital and annualized costs of the NESHAP, including emission controls and associated monitoring equipment, are estimated at \$1.4 million and \$862,000/yr, respectively. The economic impacts are predicted to increase product prices less than three-fourths of a percent. One company in the industry is a small entity which would be subject to the standards. The economic impact of the NESHAP on this company is estimated to be low and would not be significant. No production line or plant closures are expected.

#### IV. Summary of Comments on Proposal and Responses

##### A. Selection of Pollutants

###### 1. Hydrogen Fluoride

*Comment.* One commenter said that the Agency had no empirical data measuring whether and to what extent HF is actually emitted from phosphoric acid manufacturing and phosphate fertilizer production facilities, and, that the Agency should not, and legally may not, propose or promulgate a NESHAP for HF emissions from these facilities. The commenter questioned whether or not phosphoric acid manufacturing and phosphate fertilizer production facilities actually emit HF. The commenter said that no direct measurements of HF emissions from such facilities have ever been made. The commenter went on to question the calculations used to support the original listing of the source categories and the validity of the listings. The commenter further questioned the suitability of the Agency's use of a state permitting report (docket item II-I-32cc) since it did not contain results of direct measurements of HF. The commenter read the March 1995 review draft technical support document (TSD) as recognizing, whether or not, and to what extent, HF may be emitted by the sources affected by the draft NESHAP is dependent to a large extent on the levels of silica present in the processes in question. The commenter postulated that ammonia also ties up fluoride as ammonium bifluoride, making it even less likely that phosphoric acid manufacturing and phosphate fertilizer production facilities actually emit HF. Thus, the commenter concluded that it appears that the Agency is basing both its determination that the facilities in question emit HF and its estimation of the amount of HF emitted on two sources: (1) "calculations" made by an EPA contractor; and (2) a report prepared by a company in connection with state toxic air pollutant permitting. The commenter said that these "calculations" are unverified estimates and are not based on empirical data. The commenter continued that the state permitting report was not based on actual measurements of HF emissions. Rather, the silica content of monitoring impingers employed to test total fluoride emissions in two test runs was used to create a mass balance for various fluoride species across all of the fluoride emission points at the facility in question.

One commenter said that the HF fraction of the fluorides in air emissions from phosphate-ore plants, in view of

the speciating difficulties of ascertaining the exact fraction as HF, should be closer to the "1/3 rule" of chemistry (the reaction of  $\text{H}_2\text{SiF}_6 \rightarrow 2\text{HF} + \text{SiF}_4$ ), not the 28-49 percent range EPA is considering. The commenter said that with silica present in all parts of the phosphoric acid process it is logical for the HF portion in air emissions to be a mere fraction of the 28-49 percent range.

*Response.* The Agency responds to the statement that HF has not been directly measured or detected at phosphate fertilizer complexes by referring to docket items II-A-6 and II-A-12 which are reports of Agency tests which used Fourier transform infrared spectroscopy (FTIR) sampling and analysis to directly measure HF and silicon tetrafluoride at two facilities. Hydrogen fluoride was measured in amounts that exceeded the major source cutoff under Section 112. It was noteworthy that no silicon tetrafluoride was present in several test runs. In those test runs where silicon tetrafluoride was measured, its concentrations were dwarfed by those of HF. In a third test reported in docket item II-D-15, HF was also measured. The significance of all of these tests is that there are major sources of HAP emissions and HF was in fact directly measured. The low amount of silicon tetrafluoride present is supportive of the Agency's approach of estimating the HF component of total fluoride as one third of the total as predicted by the chemical equations cited in the TSD. The information in the State toxics permitting report (docket item II-I-32cc), which was submitted to the State by a source in the industry, supports this approach.

*Comment.* One commenter said the Agency used inconsistent methodology in evaluating and regulating HF from processes and the associated cooling ponds. It was the commenter's position that the Agency must use total fluoride as a surrogate for HF in all situations, including cooling pond emissions. Further, the commenter thought that use of one HF test from one cooling pond was highly questionable given the historic wide variation in fluoride emission data from gypsum/cooling ponds. The commenter cited an Agency publication that gave fluoride emission data for gypsum/cooling ponds that has ranged from 0.2 to 10 lbs. of fluoride a day per acre of surface area. The commenter concluded that gypsum/cooling ponds remain a major source of fluoride emissions and the Agency had not established a sound scientific basis for concluding that HF was not a significant part of the large fluoride emissions from the cooling ponds.

*Response.* The Agency's analysis of NESHAP for cooling ponds focused upon HF emissions because direct measurement data were available. The Agency is aware that those results differed from those of prior studies, including the Agency's own FTIR studies. The variations in data result in different possible estimates of total emissions. Nevertheless, these differences are not important for the purposes of the present rulemaking. The MACT floor determination is driven by the availability of existing control techniques. Here, MACT for existing cooling ponds is no control because there are no demonstrated control techniques used in practice which could have been applied to these sources, regardless of estimated emissions.

Total fluorides were used as a surrogate for HF to establish MACT for emissions from process sources, in contrast to the ponds, because no direct measurements of HF were available and because the NSPS are based on total fluorides. The Agency notes that the results of the FTIR analyses for cooling ponds gave proportions of HF relative to total fluoride which were consistent with those predicted by chemical stoichiometry and, therefore, are supportive of the Agency's approach to estimating the impacts of the emission standards for processes. Since the control of total fluorides and HF from process sources is accomplished with the same control technology (scrubbers), the MACT analysis results in the same level of control regardless of how the emissions are characterized. The use of total fluoride as a surrogate for HF simply changes the manner in which the emissions limit is quantified, not the actual level of control.

###### 2. HAP Metals

*Comment.* Three commenters stated that particulate matter is an adequate performance measurement for the most likely control technology (wet scrubbers). However, they were concerned that particulate matter used as a surrogate may not accurately track all HAP metals emissions. Their primary concern arose from the fact that calciners operate at temperatures near 1,500 degrees F, which volatilize some HAP metals (such as arsenic, cadmium, mercury and selenium). They noted that such volatilized metals would likely condense as sub-micron particles (for which the scrubbers have significantly lower control efficiency than they do for the bulk of the calciner particulate matter) and that Method 5 measurements would not reflect those emissions. This could lead to an erroneous conclusion that those

pollutants were adequately reduced. In consideration of these concerns, the commenters suggested that the final rule should require affected sources to collect appropriate data (such as that established by Method 29) with which to determine the extent of HAP emissions from calciners.

*Response.* As the commenters noted, the MACT floor technology consists of wet scrubbers. EPA used available particulate matter emissions data to serve as a surrogate for HAP metals. This PM Surrogate will require the installation of equipment at least as efficient as the technology that is representative of the floor level of emissions. Emission tests and analysis for metals is more costly than simply testing for particulate and would not result in a different floor technology. Therefore the Agency is requiring that particulate testing be performed to demonstrate compliance.

*Comment.* One commenter said that no direct information was presented to confirm the existence of HAP from dryers and calciners at phosphoric acid manufacturing facilities. The commenter asked that all sections of the proposal dealing with these sources be deleted in the absence of some evidence that they are major HAP emitters.

Another commenter said that the data cited by the Agency are not a sufficient basis for the establishment of a NESHAP for such metals. The commenter stated that there are no stack test data specific to HAP metals and the only data on HAP metals cited are those included in a state toxic air pollutant permitting report (docket item II-I-32cc). The commenter said the establishment of NESHAP (or for particulate matter as a surrogate for such metals) is beyond the legal authority of the Agency under the Act.

*Response.* Since HAP metals are present in phosphate rock, they will also be emitted from equipment subjecting the ore to high temperatures. The information in the TSD and the docket, to which commenters allude, is air toxics information provided to the State of North Carolina (docket items II-I-32aa and cc) that certifies that a particular source in that State emits HAP metals from dryers and calciners. The State has endorsed the submittals of that source in the form of approved air toxics permits. In particular, item II-I-32aa, which is an attachment to item II-I-32cc, contains results of direct testing of particulate matter from calciner emissions. The testing found arsenic, manganese, nickel, and cadmium, all of which are HAPs. Thus, the Agency concluded that PM is an effective surrogate for HAP metals.

Also, the docket includes item II-I-52u that refers to information provided to a State regulatory agency that indicates that HAP compounds are emitted from calciners that a commenter operated and for which the commenter has current operating permits. Commenter's point that some dryers and calciners may not be major HAP emitters by themselves would not excuse the Agency from a duty to establish emissions limits for that equipment when it is located at major sources of HAPs.

### 3. Total Reduced Sulfur (TRS)

*Comment.* One commenter expressed concern that the NESHAP would not address TRS emissions from WPPA plants. The commenter gave as an example one facility that emits 1690 tons per year of TRS and noted that those emissions dwarfed those of kraft pulp mills in its jurisdiction. The commenter suggested that TRS should be regulated and the most appropriate way to do so would be through the next review of the NSPS in subpart T.

*Response.* Because the TRS pollutants are not listed as HAPs for the purposes of the Act, the Agency presently is not required to regulate TRS under section 112 of the Act. The commenter's suggestion of considering limits on TRS during the next review of the NSPS in Subpart T will be addressed in that context.

### B. Compliance Provisions

#### 1. Use of Monitored Operating Parameters for Establishing Violations of the Standards

*Comment.* A number of commenters expressed their opinions on the Agency's proposal to relate operation outside established site-specific ranges of wet scrubber pressure drop and liquid flow rate to exceedances of the emissions limits. The commenters were unanimous in questioning such relationships for emissions levels for total fluorides and particulates for the sources subject to these NESHAP. One commenter claimed that there was no basis for limiting the variation in operating parameter monitoring results to plus or minus ten percent of the level observed during a performance test. The commenter said there were no data in the record to support any correlation between operating parameter exceedances and a violation of the proposed NESHAP emission limits, much less a correlation between a greater than ten percent variation in operating parameter values and such a violation. Another commenter said the proposed  $\pm 10$  percent restriction limit

on the emission control devices (usually scrubber pressure drop and the liquid flow rate) was needlessly restrictive. The commenter recommended a  $\pm 17$  percent restriction limit as being less restrictive and serving as a "surrogate" indicator for continuous monitoring of equipment whose function is to maintain emission limits.

The primary industry commenter argued that there is nothing in the record of this rulemaking to establish that an operating parameter exceedance is "credible evidence" of the duration, much less the existence, of a violation of the proposed NESHAP emission limits. The commenter noted that the data contained in the record of this rulemaking consist entirely of performance test results and there are absolutely no data or information in the record upon which the Agency could base a determination that the operating parameter exceedances identified in the proposal can be equated with a violation of the proposed NESHAP emission limits. The commenter provided data for the purpose of indicating that sources might meet proposed emissions limits over a wide range of operating conditions. The data covered a period of years and included a wide range of operating conditions. As a group, these commenters were of the opinion that control device operating parameters such as scrubber pressure drop and liquid flow rate could be used as indicators of proper operation and the need for maintenance.

In the event that the monitoring provisions of the proposal were retained, three commenters recommended that sources electing to use historic test results to establish a range of operation for control device operating parameters as provided by proposed §§ 63.604(d)(2) or 63.624(f)(2) should be given the same opportunity to retest to demonstrate that prior exceedances did not constitute violations of emission limits as provided in §§ 63.604(d)(1) or 63.624(f)(1). Pursuing the logic of the previous paragraph, one of the commenters said the basis for the retest option would be the fact that compliance with the emission limits can be achieved even if operating parameter values are outside the range observed during a compliance performance test. The commenter held that this rationale was valid whether the operating parameter ranges are established by the plus or minus ten percent method or by the owner or operator under the alternative method.

Some commenters believe it is prudent to keep the continuous parameter monitoring requirements in



the proposed rule to assist operators in determining whether their controls are operating properly. They note that while it is not necessarily true that sources are in compliance with the emission standards just because their two monitored operating parameters are within the range of values established during the performance test, exceedances of operating parameters are good indicators of control device malfunctions. These commenters recommended not allowing sources that exceed the continuous monitoring parameters set during the performance test to have the opportunity to retest within 30 days to demonstrate that the prior exceedance did not constitute a violation of an emission limit, as proposed. The commenters believe it would be very difficult to ensure that the proposed provisions requiring the source to establish and maintain during the re-test the same operating conditions that existed during the exceedance of the operating range could be properly followed and that the retest would, in all probability, not represent conditions present during the exceedance. Furthermore, they commented that the allowance to retest would add another layer of complications for determining compliance under the rule. They recommended deleting the allowance to retest from the final rule.

*Response.* The final rule accommodates the concerns raised with regard to the Agency's proposal linking exceedances of operating parameter ranges to compliance with the emission limit. Specifically, the final rule eliminates this direct linkage, based on data submitted by commenters' indicating that compliance with an operating parameter range does not always correlate to compliance with the emission limit, and it establishes instead operating parameter limits which help assure continuous compliance with the emission limit. In so doing, the rule also reflects other concerns that the standard should contain operating requirements aimed at ensuring proper operation and maintenance of sources' control devices. Consequently, although the data available to the Agency did not establish an exact correlation between operating parameter values and specific exhaust gas concentrations, the rule retains the requirement to maintain operating parameter values within established ranges, in order to help assure that MACT is being complied with on a continuous basis.

Monitoring of an operating parameter, with an enforceable operating limit, will help assure continuous compliance with the emission limit through continuous

emission reductions. The operating limit is a separately enforceable requirement of the rule and is not secondary to the emission limit.

This standard requires sources using wet scrubbers to continuously monitor the scrubber liquid flow rate and the pressure drop across the scrubbers and to maintain these operating parameters within ranges under which the source demonstrates, via a performance test, the source can comply with the emission limit. The operating limits established during a performance test help assure continuous compliance with the emission limit. The EPA has considered the commenters' argument that an exceedance of an operating parameter is not necessarily an exceedance of an emission limit and has consequently not made operating limit exceedances automatic violations of the emission limit; however, the Agency has made these operating limits separately enforceable requirements of the rule in order to promote continuous compliance with the emission limit.

By doing so, the final rule accounts for the commenters' claims in two ways: (1) the operating limits include an operating margin of  $\pm 20$  percent for sources that base the operating limit upon the baseline values of operating parameters established in the most recent performance test; and (2) by allowing sources to establish operating limit ranges based upon baseline values of operating parameters established in either historic performance tests or performance tests conducted specifically to establish such ranges. Thus, sources have two options to establish operating limit ranges within which the source will still be in compliance with the operating limit. By including an operating margin, the EPA recognizes that control devices can be operated and maintained under a range of conditions and still help assure compliance with the emission limit through continuous emission reduction. For the final rule, the Agency has increased the operating margins in the first instance described above from  $\pm 10$  percent at proposal to  $\pm 20$  percent. This change was made in response to the Agency's review of data submitted by the industry commenters that showed a wide range of variability in the level of operating parameters over which the emissions limits could be achieved. The Agency believes that sources which operate in these expanded margins and sources which keep operating parameters within a range established on the basis of test data generally will be meeting the emission limit and, thus, these changes make the operating requirements more likely to provide a

reasonable assurance of the source's compliance status. As an additional safeguard to ensure that these operating requirements are set to help assure continuous compliance with the emission limit, when performance testing shows emissions near the emission limits, the permitting agencies have the discretion to shrink a previously-established operating range when a source operating within the broader range could be expected to exceed the emission limits. On the other hand, the Agency does not believe that it is necessary to further expand these operating margins, as some commenters suggest, because the rule permits sources to undertake additional performance testing to establish operating limits which reflect compliance with the emission limit for the full range of operating conditions at the source.

Finally, because the final rule does not make operating limit exceedances automatic violations of the emission limit, and because the operating limits are separately enforceable requirements of the rule, a provision which allows the source to retest to show that certain operating parameter levels do not equate with an emission limit violation is unnecessary. Accordingly, the Agency has deleted the retest provision, as suggested by the State commenters.

*Comment.* Two commenters said, in many cases, the pressure drops involved are less than one inch and the commenter is unaware of monitoring equipment that can measure at the tenth of an inch level necessary to determine whether or not the measured pressure drop is plus or minus ten percent of that observed during a performance test.

*Response.* As a result of the comments concerning possible unavailability of instrumentation with suitable sensitivity, the Agency contacted an instrument vendor and was advised that the necessary equipment is available.

*Comment.* One commenter speaking for the industry as a whole said that operating parameter exceedances may not be denominated as violations of NESHAP emission limits. The commenter said the Act provides no legal authority to denominate operating parameter exceedances as violations of emission limits. The commenter said this is particularly the case when, as here, the emission limits have been developed using a database which consists entirely of performance test results. In such a case, the denomination of operating parameter exceedances as a violation of the emission limit would have the effect of changing the emission limit without

sufficient technical support in the record.

The commenter anticipated that the Agency could argue that section 113(e) of the Act provides the necessary legal authority and noted that the section provides that the duration of a violation may be established by "any credible evidence (including evidence other than the applicable test method)." However, the commenter posited that any argument that section 113(e) provides legal authority to denominate operating parameter exceedances as a violation of emission limits in general, and the proposed NESHAP in particular, would be without merit. The commenter argued section 113(e) permits any credible evidence other than the applicable test method to be used only to establish the duration of a violation, not the fact that a violation has occurred.

*Response.* The final rule does not make exceedances of operating requirements per se violations of the emission limitation. As such, the commenter's concern presumably has been addressed by changes since proposal. The Agency, however, specifically disagrees with the commenter's suggestion that, under the Act, parameter deviations cannot be denominated as violations of applicable emission standards. Section 113(a) of the Act directly contradicts the commenter's position. It permits enforcement actions for violations of the statutory requirements "on the basis of any information available to the Administrator\* \* \*". This broad language means that the Agency can prove a violation based on any information available, limited only by general evidentiary rules.

In addition, the commenter's reading of section 113(e) is too constrained. As the Agency stated in the Credible Evidence rulemaking, section 113(e)'s focus on the duration of a violation grew out of Congress's desire to reverse a judicial decision prohibiting the Agency from establishing a violation's duration by non-reference test methods. See 62 FR 8314, 8320-22 (February 24, 1997). Section 113(e) should not, therefore, be read to limit the Agency's ability to prove the fact of an emission violation, in addition to the duration of such violation, by any credible evidence.

## 2. Selection of Monitored Parameters

*Comment.* One commenter said operating parameter ranges should be established on the basis of any relevant data as opposed to the proposal that would allow alternatives to the plus or minus ten percent operating range to be established using data obtained during

full-scale performance testing. The commenter thought that data other than that obtained during full-scale performance testing could validly establish operating ranges for pressure drop and liquid flow rate that are representative of compliance with the NESHAP emission limits. The commenter believed that because other data may be used to establish the required operating ranges, and because the ranges must be approved by appropriate government officials, the proposed §§ 63.604(d)(2) and 63.624(d)(2) should be revised to permit the establishment of the required operating ranges on the basis of any relevant data or information, including engineering assessments and manufacturer's recommendations.

Another commenter said that changes in pressure drop are not always an accurate indication of changes in performance for certain types of scrubbers. In particular, the commenter said phosphoric acid production and DAP/MAP fertilizer production are each highly scaling (e.g. depositing hard incrustations inside process vessels) services, and pressure taps necessary for continuous pressure drop monitoring readily scale over in both services. The commenter said that while it is certainly possible to operate a continuous pressure drop monitoring system in these services, keeping the pressure taps from scaling over can be a maintenance-intensive effort. So, the commenter suggested that the final version of the proposed rule should allow for continuous monitoring and recording of some other appropriate indicator parameter(s) in lieu of pressure drop in cases where other parameters provide a more accurate indication of scrubber performance.

*Response.* Since the scrubber pressure drop and liquid flow rate are direct indicators of the operation of the control device and its performance during the most recent testing, the final standards continue to require that those parameters be monitored. The commenters' suggestions that other "relevant" or "appropriate" indicators should be specified in lieu of pressure drop and liquid flow rate are vague and would result in case-by-case debates as to whether any of innumerable options may or may not accomplish the same degree of feedback on the performance of emissions controls. The commenters provided no data as to how other parameters correlate with emissions limits. Likewise, establishment of the required operating ranges on the basis of any relevant data or information, including engineering assessments and manufacturer's recommendations, as

suggested by the commenters, would be insufficient because there would be no link established between such ranges and the emission limits as is the case when ranges are set during performance testing. The general provisions provide the opportunity for sources to obtain consideration of alternative monitoring, as needed.

## 3. Frequency of Testing

*Comment.* Two commenters said that the proposed one-time performance testing was inadequate. The commenters cited the example of one source that is required to test WPPA plants, phosphate rock dryers and calciners, DAP/MAP plants and GTSP plants on an annual basis. The commenters recommended that the Agency require testing either annually or once every permit cycle. The commenters consider one-time performance testing insufficient and a step backwards from their current requirements.

The commenters considered the proposed one-time performance test requirement for sources ineffective and inadequate to demonstrate compliance with each applicable numerical emission limit for total fluorides and particulate matter (surrogate pollutants). They stated that most sources at the affected facilities currently perform at least annual stack testing for the surrogate pollutants identified above. They commented that air pollution control agencies have required this level of testing because their experience indicates that these sources are prone to problems with control device maintenance. They note that many affected facilities, which represent large industrial complexes that have undertaken this type of stack testing for numerous years, use their own environmental compliance staff to conduct the tests, minimizing any economic burden. Accordingly, the commenters recommended that the minimum requirement for ensuring compliance with the proposed emission standards should be annual stack testing using the methods described in the performance tests and compliance provisions sections (§§ 63.606 and 63.626).

*Response.* The Agency has taken note of the comments that the equipment and control devices in these source categories are subject to harsh conditions that cause corrosion and scaling of the process components and that State agencies already require annual tests of these facilities. So, the performance of the emissions controls will vary over time and so may emissions. Thus, the Agency is promulgating a requirement for annual

testing in the final rule. This change is also important in light of the decision not to make operating parameter exceedances violations of the emission standards, which raises concerns as to how to ensure appropriate enforcement of the NESHAP. As was noted by commenters, most jurisdictions already require annual, or more frequent testing and, so, this will add minimal burden beyond that already required of the sources.

*Comment.* One commenter said that in the event that the Agency retains the provisions for designating exceedances of operating parameter ranges as violations, he supports the alternative method of setting the operating range for parameters of the air pollution control device.

*Response.* The alternative for establishing operating ranges based upon prior performance test results was retained in the final rule.

#### 4. Simultaneous Testing

*Comment.* Two commenters said the requirement for simultaneous testing would be burdensome for most facilities with multiple emission points because, read strictly, this would require multiple test crews and equipment whenever dealing with multiple emission points. One of the commenters said this requirement would add nothing to the quality of the information gathered. The other commenter found ambiguity in the word "simultaneous." He questioned whether "simultaneous" meant exactly at the same time, or within a certain number of minutes or hours. Also, the commenter said the processes undertaken at these facilities are continuous operations and variations within these continuous operations would be expected to be slight. Finally, the commenter said simultaneous performance testing had never been required by the existing NSPS on which the proposed NESHAP were based. The commenter said under the NSPS, the relevant regulatory authority establishes performance testing requirements based on the circumstances presented by individual facilities. The commenter said that the NSPS performance testing requirements have been in place for more than 20 years and there is no suggestion that the current approach to performance testing is inadequate or inappropriate. So, he recommended that the timing of performance testing be decided by the Administrator on a case-by-case basis.

*Response.* Since there is a limited number of sources where multiple emissions points are present and there are no known instances where testing has been a problem in the past, the

Agency decided not to make simultaneous testing mandatory in the final rule. The site-specific test plan required by § 63.7(c)(2) of the general provisions will cause development of test plans that can address the concerns which lead the Agency to propose simultaneous testing.

#### 5. Process Monitoring Requirements for Purified Phosphoric Acid (PPA) Plants

*Comment.* One commenter recommended that the proposed process feed rate monitoring requirements be amended to delete reference to PPA plants. They noted that their plant records P<sub>2</sub>O<sub>5</sub> feed to the process on a daily basis, and that, given the averaging period for MIBK additions, continuous recording of feed rate is unnecessary. In addition, the commenter recommended substituting "product" for "stripped" in connection with the descriptions of the acid streams in proposed § 63.604(f)(1) to distinguish them from those referenced in proposed § 63.604(f)(2).

*Response.* The Agency agrees with the commenter and the regulations have been appropriately changed.

#### 6. Other

*Comment.* One commenter opined that approval authority for operating parameter ranges should be broadened. As proposed, §§ 63.604(d)(2) and 63.624(d)(2) required that pressure drop and liquid flow rate ranges be approved by "the permitting authority." The commenter was concerned that limiting approval authority to the permitting authority was unnecessarily restrictive and could result in the inability of an owner or operator to establish operating parameter ranges because there may be, at the relevant time, no "permitting authority" to give approval. To address this potential problem, the commenter recommended that operating parameter range approval authority be vested in the "Administrator."

*Response.* That term was deleted from the final rule which, instead, now refers to the Administrator as defined in the General Provisions 40 CFR, part 63, 63.2 Definitions.

*Comment.* One commenter recommended that the proposal (§§ 63.605(c)(3)(ii) and 63.625(c)(3)(ii)), which would require that the P<sub>2</sub>O<sub>5</sub> content of the feed to the processes subject to the NESHAP be determined in accordance with Method 9 of the Association of Official Analytical Chemists (AOAC), be revised. The commenter observed that Method 9 was the accepted method for P<sub>2</sub>O<sub>5</sub> determinations in 1974 when it was specified by, and incorporated by reference in, the NSPS for the processes

subject to the proposed NESHAP. In the intervening 23 years, AOAC has developed and specified more advanced methods for making the P<sub>2</sub>O<sub>5</sub> determination, including Methods 962.02, 969.02, and 978.03. The commenter recommended that in order to avoid specifying outdated methods for the P<sub>2</sub>O<sub>5</sub> determination; and in order to keep this section of the NESHAP "evergreen," proposed 40 CFR 63.605(c)(3)(ii) and 63.625(c)(3)(ii) be revised to read: "(ii) The P<sub>2</sub>O<sub>5</sub> content (Rp) of the feed shall be determined in accordance with the method(s) of the Association of Official Analytical Chemists."

*Response.* The Agency agrees that the specified AOAC methods are appropriate methods to determine the total phosphorus content of fertilizer, has amended § 63.14 to incorporate by reference AOAC methods 929.01, 929.02, 957.02, 958.01, 962.02, 969.02, and 978.01, and has added appropriate references to those methods in the rule. The Agency also has identified appropriate test methods published by The Association of Florida Phosphate Chemists to quantify total phosphorus content of fertilizer. In addition the Agency has added appropriate references to methods published by The Association of Florida Phosphate Chemists to quantify total phosphorus content of phosphoric acid, superphosphoric acid, triple superphosphate, and ammonium phosphate.

The commenter suggested that a general reference to AOAC methods was a way to avoid citing outdated methods. The Agency does not agree that this is acceptable since changes to a method could affect the stringency of the regulation. It is therefore important that the Agency review changes in consensus methods to assure that this does not inadvertently happen. The Agency accomplishes this by citing a specific version of a consensus method.

*Comment.* A commenter recommended that the determination of whether pressure drop is measured across each scrubber in the process scrubbing system or across the entire scrubbing system be left to the Administrator on a case-by-case basis. The commenter noted that production facilities subject to the NESHAP employ various types of scrubbers, and various scrubber configurations, as a means of achieving compliance with the current NSPS and that these same systems will be used to achieve compliance with the NESHAP. The commenter said that, because of the variation in the types and configurations of scrubbers used to achieve compliance, a requirement to

measure the total pressure drop across each scrubber in the process scrubbing system in all cases could be unnecessarily burdensome. The commenter went on to say that monitoring of both pressure drop and flow rate may not be appropriate in all cases and that the determination of the appropriate operating parameter(s) for monitoring should be made on a case-by-case basis. The commenter posited that the requirement to install continuous parameter monitoring systems for both pressure drop and flow rate in all cases could be unduly burdensome, inappropriate and not supported by the record. The commenter said whether pressure drop or flow rate is the relevant parameter for monitoring turns largely on the HAP being controlled by the relevant NESHAP.

*Response.* The documentation of the proposed NESHAP made clear that the Agency was aware of the wide range of possible scrubber configurations that can be and are used to meet the NESHAP level of control. As written, the rules provide sources with flexibility to meet the emission limits in the manner most efficient for a given source. Accordingly, when choosing to use multiple control devices to achieve limits that can be met by a single device, a source also accepts the requirements attendant to operating and monitoring those devices. To allow sources to monitor only chosen components of control systems as suggested by the commenters would undermine the effectiveness of the monitoring requirements in assessing the overall performance of controls. The control systems are essentially doing the same job regardless of whether removal of pollutants is occurring in one or a series of vessels. The main concern is one of providing sufficient time for the effluent gases to contact an absorbent liquid. The key parameters therefore are contact time as reflected by pressure drop and sufficient quantities of absorbent as reflected by liquid flow rate. The overall operating effectiveness of the controls is reflected in those two parameters.

*Comment.* One commenter questioned the two hour test time in proposed § 63.605(e)(1) which would require that the sampling time for each run of a performance test for phosphate rock calciner particulate matter emissions be "at least 2 hours." Further, the commenter believed that the equipment employed in performing the relevant reference method would be incapable of producing accurate results when operated for a two-hour period due to the plugging of the particulate matter filters involved. Consequently, the

commenter suggested that the per-run sampling time for particulate matter performance testing of phosphate rock calciners be set at one hour.

*Response.* There are two factors generally considered when specifying a minimum particulate matter (Method 5) sampling time in a regulation. The first priority is to assure that sufficient sample mass would be collected to obtain quantitative results with an acceptable degree of confidence at the level of the emission limit. The sample size needed to determine compliance at concentrations of 0.040 grains per dry standard cubic foot is small enough that one hour is a sufficient sampling time. The second factor is the time necessary to obtain a sample that represents normal process operational cycles. Calcination is a continuous operation. Hence, this is not an overriding factor. Thus, consistent with the commenter's suggestion, the Agency is specifying a minimum sampling time for each performance test run of 1 hour.

*Comment.* One commenter said the Agency recognized in the preamble to the proposed NESHAP that performance testing requirements for uncontrolled GTSP storage buildings have not yet been proposed by the agency and reserved the right to comment on these performance testing requirements when they are proposed.

*Response.* The Agency previously promulgated Methods 13 A and B which are applicable to GTSP storage buildings. Sources electing to determine compliance without control devices or stacks need to develop site-specific test protocols that are equivalent to Method 13. Source owners wanting to assure compliance in an alternative manner should propose a measurement procedure in their site-specific test plans, required by § 63.7(c)(2). The regulation requires that the owner or operator submit those plans to the Agency for review within twelve months of promulgation. The Administrator's review procedure is governed by § 63.7(c)(3). In the interest of maintaining uniformity in the implementation of the NESHAP, the Administrator has retained from delegation the authority to approve site-specific test plans for uncontrolled granular triple superphosphate storage buildings developed pursuant to § 63.7(c)(2)(i). This retention of authority is contained in § 63.629 entitled "Miscellaneous requirements."

### C. Emission Limits

#### 1. General

*Comment.* One commenter expressed the opinion that the Agency has

proposed reasonable emissions limits which can be reasonably met using commercially available control technologies.

*Response.* None required.

#### 2. Wet Process Phosphoric Acid (WPPA) Plants

*Comment.* One commenter said the Agency should amend the standard for existing WPPA facilities to be the same as for new WPPA facilities because the proposed action failed to consider and analyze the economic advantage that the proposed standard would give existing facilities over new facilities.

Also, the commenter said the proposed MACT floor standard for existing facilities failed to consider the benefits of airborne radionuclides reductions achieved by the proposed new facility standard. Citing the Agency's proposal not to exercise its statutory authority to go "beyond-the-floor" and require more stringent controls on existing WPPA plants based upon EPA's analysis of the health impacts of HF and HAP metals, the commenter was unaware of any Agency analysis of the human health and environmental benefit. The commenter maintained that the Agency was required by section 112(d) to evaluate the public health benefit and the environmental benefit which would result from the decreased radionuclide emissions associated with the particulate if existing WPPA facilities were required to meet the new source WPPA standard for HF emissions.

*Response.* The Agency's actions have been guided by the language of the Act. The Act clearly states that standards for new and existing sources should be determined differently. The commenter was correct in his observation that the Agency has a duty to consider going beyond the floor level of control for existing sources.

For this rulemaking, there were no data which to base analyses of additional reductions in radionuclide emissions. There was information on HF and HAP metals emissions. So, the Agency's analysis for going beyond the MACT floor focused upon those pollutants.

As a part of that consideration, the Agency first explored the possibility that different control technologies were available and demonstrated for the classes of sources being controlled by today's action. None were found that had been demonstrated and could be applied without creating additional negative impacts on other environmental media. The Agency also considered whether the new source emission limits could be applied to

existing sources. The emissions data showed that high levels of control were being achieved in both cases and that there was minimal opportunity for incremental reductions to be achieved in a cost-effective manner by going from the existing-source MACT floors to the levels of new source MACT. As discussed above (I. B.), a simple calculation of the application of new source MACT in place of existing source MACT for the subcategory of WPPA plants, which have the greatest differential between the two levels of control, indicates that the costs would be unreasonable. In that example, the annualized capital cost of achieving the additional annual HF reduction of 0.34 tons per year was \$17,253 per year. There, the cost effectiveness of the additional reduction would be \$50,744 per ton of additional HF removed, which the Agency considers to be inappropriate at this time.

### 3. Evaporative Cooling Towers at Phosphoric Acid Manufacturing Plants

*Comment.* Commenters support the Agency's proposed requirement to forbid the introduction of liquids containing the effluent from air pollution control devices into any evaporative cooling tower. They agree that it does not make sense to scrub hydrogen fluoride and other HAPs from potential emission points and then allow these HAPs to evaporate when the scrubber water is routed to evaporative cooling towers.

One commenter said that separating water discharges of pollution control devices from the evaporative cooling towers would cost one source in its jurisdiction approximately \$0.4 million for process alterations. The commenter stated that it could cause the source various operational problems of increased water consumption and plant water effluent, for which the source has no water effluent-handling facilities outside of land application.

One commenter stated that his is the only existing facility affected by this proposal and estimates compliance costs will be several hundred thousand dollars. He commented that the Agency had not considered the benefits or the compliance costs of the proposed work standard and that § 63.602(e) should be deleted.

*Response.* For phosphoric acid manufacturing, the Agency has elected to base NESHAP upon the floor level of control. This is the least stringent option permitted by the Act. Any consideration of costs would be of significance only for consideration of options for control levels exceeding the floor level of stringency.

*Comment.* Two commenters noted that the language for existing and new evaporative cooling towers does not agree and proposed that § 63.602(e) should be used for both.

*Response.* The Agency agrees that the language for existing and new evaporative cooling towers should have been identical. It was the Agency's intent to use the language described for existing sources for new ones also and this has been changed on the final rule.

### 4. Phosphate Rock Calciners and Dryers

*Comment.* One commenter expressed the opinion that the proposed particulate matter limit of 0.040 grain per dry standard cubic foot (gr/dscf) for calciners is readily achievable and went on to note that emissions below 0.025 gr/dscf have been achieved for at least one calciner. The commenter suggested that the Agency should also limit emissions of fluorides from calciners.

*Response.* The Agency agrees with the comments upon the achievability of the proposed emissions limits. The first number referred to by the commenter was selected as MACT for existing calciners via the rationale in the proposal. The limit selected for existing sources was established on the basis of test data for several calciners that actually process phosphate ore and the data show that the emissions limits can be met on an ongoing basis. The lower number given by the commenter has been achieved by calciners in other categories. However, the commenter provided no information that this level of control is achievable for phosphate rock calciners. The selection of new source MACT described in the proposal was made using data specific to this industry to ensure achievability. The Agency did consider setting a fluoride limit for calciners. The wet scrubbers used in the industry for control of particulate matter also capture hydrogen fluoride. Even if the Agency had established an HF floor, it would have been based upon the same control devices that provided the basis for setting the particulate limit.

### 5. Purified Phosphoric Acid (PPA) Plants

*Comment.* One commenter initially recommended that the level of the proposed MIBK standard should be changed from that which was proposed. Included with the comments was information describing plant modifications, updated MIBK inventory records and process records from which emissions could be determined. The Agency reviewed the updated information and concluded that it supported neither the proposed

standards nor those suggested in the commenter's recommendations. To clarify the comment, the commenter consulted with its State air pollution control agency to discuss alternatives. Two commenters stated that the leak detection and repair (LDAR) provisions of 40 CFR part 63, subpart H would be a workable means of addressing fugitive emissions. Other commenters stated that the LDAR program would not address tank and stack emissions and they supported keeping the proposed requirements to maintain the chiller stack temperature and the MIBK concentration of the raffinate (process waste materials) and product acid within specified limits.

*Response.* One commenter manufactures PPA through a solvent extraction method. The plant emits MIBK, which is a HAP. Fugitive emissions of MIBK from valves, flanges, and seals are reduced by means of an ongoing maintenance and repair program. As the lone PPA facility in the source category, its control methods constitute the MACT floor for controlling fugitive emissions of MIBK. At proposal, the Agency translated the source's maintenance and repair program into a numerical limit on MIBK that was to be determined through plant production and MIBK makeup records. The proposal was based upon the premise that the MIBK makeup requirement was a result of fugitive emissions. That approach was proposed because the Agency thought that doing so would simplify enforcement of a standard based upon effectiveness of the work practices in place at the plant for limiting process losses of MIBK. In response to a commenter, the Agency reviewed information in the record prior to proposal and the additional information provided by the commenter for the purpose of determining whether the proposed numerical limit would be an appropriate means of implementing MACT. The data indicated that a numerical limit could not be established. Emissions were not related to production and, therefore, the proposed standard which tied allowable emissions to the production rate was not a valid approach.

The MIBK cannot be emitted through a conveyance designed and constructed to capture this pollutant.

Upon consideration of the fugitive nature of these emissions, the available information and the public comments received, the Agency has concluded that it is not feasible to prescribe or enforce an emission standard for control of these emissions. In section 112(h)(1), the Act provides that the Administrator may prescribe a work practice standard

consistent with the provisions of section 112(d) in lieu of an emission standard, if it is not feasible to prescribe or enforce an emission standard for control of a HAP. In this instance, the work practices at the plant constitute the floor level of control. The Agency agrees with the commenters recommendation that the leak detection and repair (LDAR) provisions of 40 CFR part 63, subpart H provides a means of expressing the work practices as a regulatory requirement. The LDAR provisions in subpart H were determined during development of the hazardous organics NESHAP to be MACT for fugitive emissions sources with similar characteristics to those of the one plant emitting MIBK. After considering all available information, the Agency has concluded that subpart H is at least equivalent to the facility's current practices and has adopted the LDAR provisions of the HON as part of the MACT controls for this process. Accordingly, the Agency has referenced the subpart H requirements in today's rulemaking. The Agency is keeping the proposed requirements to monitor and maintain the chiller stack temperature and the MIBK concentration of the raffinate and product acid within specified limits.

*Comment.* One commenter suggested generalizing the definition of a PPA plant by modifying the proposed language to read as follows: "Purified phosphoric acid plant means any facility which uses solvent extraction to separate impurities from wet process phosphoric acid product acid for the purposes of rendering the product suitable for industrial, manufacturing or food grade uses."

*Response.* The Agency found the commenter's suggestion acceptable and has incorporated it into the final rule with a wording change that clarifies that coverage is limited to those sources employing a HAP compound as a solvent. So, the rules will effectively cover only one of the two processes now in use because the second process does not emit HAPs.

#### 6. Granular Triple Superphosphate (GTSP) Storage Buildings

*Comment.* One commenter supported the Agency's proposed approach limiting applicability for GTSP storage buildings to only those storage buildings co-located with GTSP plants. The commenter concurred with the Agency's rationale and cited additional reasons why the NESHAP for GTSP storage buildings should be made applicable only to such storage buildings collocated with GTSP plants. The commenter said requirements of the proposed NESHAP for such facilities

were based directly upon the pre-existing NSPS and said his review of the background documents associated with the original NSPS rulemaking indicated it was clear that the Agency intended that the NSPS apply only to collocated GTSP storage facilities. Furthermore, he noted the only GTSP storage facilities sampled in connection with the development of the NSPS were collocated facilities.

As a consequence of review of the public record, the commenter made several specific suggestions about the proposed rules. First, he said the definition of "fresh" GTSP in proposed § 63.621 should be redefined if the Agency does not limit the applicability of the NESHAP to collocated GTSP storage facilities. The commenter suggested that for regulatory purposes, the appropriate inquiry is the extent to which GTSP in storage actually emits significant amounts of fluorides. The commenter provided engineering data on measured fluoride emissions from stored GTSP and said the data demonstrate that the vast majority of fluoride emissions occur within 48 hours of the production of GTSP. The commenter recommended that the definition of "fresh" GTSP be revised to read: "Fresh granular Triple superphosphate means granular Triple superphosphate produced within the preceding 72 hours" based on the data provided.

The commenter also said that the percentage of fresh GTSP that must be present during performance testing would also have to be revised accordingly. If this were not done, no existing GTSP plant would be capable of producing "fresh" GTSP at a rate which would permit the current 20 percent limitation to be met. The commenter recommended that the percentage of the total amount of stored GTSP which must be fresh at performance testing should also be revised from 20 percent to six percent.

*Response.* In general, the Agency agrees with the commenter's conclusions and recommendations. The proposed approach was to adopt the technical component of the NSPS and to add language exempting GTSP storage buildings co-located with GTSP process lines. Shortly after proposal, the collocation issue and the technical concerns raised by the commenter also arose in the context of the NSPS itself. The NSPS was subsequently revised (see 62 FR 18308) to address those concerns. The main features of the revised NSPS were a change to the definition of "fresh GTSP" that was consistent with the commenter's recommendation and a provision

requiring producers of GTSP not to ship freshly produced GTSP until it had cured. In effect, the producers were to hold the GTSP in their storage buildings until the HF emissions had tapered off as a result of curing. This, in effect, accomplished the purpose of the proposed NESHAP with regard to limiting applicability to co-located storage buildings. In fact, the approach of the revised NSPS better accomplished that purpose by more clearly addressing which storage buildings were subject to the rules. Since, the revised NSPS addresses the concerns voiced by the commenter and the Agency considers the revised NSPS to better accomplish the purposes of establishing MACT, the final rule for this NESHAP has been amended to reflect the requirements of the NSPS, as revised.

#### 7. Cooling Ponds.

*Comment.* One commenter said that the Agency must regulate the corrosive hazardous waste in the cooling pond either under this rule or by a definitive deadline under RCRA. The commenter said that the proposed HF standards would require the discharge of air pollution scrubber water containing HF into cooling pond water resulting in unregulated corrosive hazardous waste discharge to ground waters and surface waters. The commenter added that the Agency's analysis of the non-air impacts of releases of pollution from cooling ponds did not discuss the cooling pond water pH issue and the commenter was unable to find any discussion of the non-air impacts of the surface and groundwater releases from these ponds resulting from putting additional HF into the ponds. The commenter suggested that addition of more HF to the cooling ponds will lower the pH of these ponds even further below the corrosive hazardous waste standard of a pH of 2.0. As such, the commenter maintained that the proposal did not accomplish the section 112(d)(2) mandate that emission standards "shall require the maximum degree of reduction in the emissions of the hazardous air pollutants subject to this section" achievable "taking into consideration costs and any non-air quality health and environmental impacts and energy impacts." The commenter believed that section 112(d)(2) required EPA to consider: (a) the enclosure of systems to eliminate emissions; (b) the collection, capture or treatment of such pollutants when released from a process, stack or storage facility; or, (c) design standards for processes.

In addition, the commenter said the proposed rule also did not comply with

the Pollution Prevention Act because the proposed rule did not address the cooling pond water corrosive hazardous issue by EPA using its powers under section 112 of the Act or under RCRA to eliminate or reduce the surface and groundwater pollution from the HF in the cooling ponds.

*Response.* Although this rulemaking is focused upon air emissions and regulating cooling ponds with respect to RCRA goals would be outside the scope of this action, the Agency has considered the impacts of MACT upon other media. An engineering analysis of options for addressing the HF content of cooling ponds was included in the docket prior to proposal as item II-B-9. As part of that analysis, consideration was given to a process that would eliminate flows to cooling ponds as encouraged by the Pollution Prevention Act. While the Agency found the new process promising, it was not demonstrated under commercial conditions and could not be adopted as an available control technology. This was specifically discussed in the proposal (61 FR 68444).

As the preamble to the proposed rules indicated, it is the Agency's expectation that five process lines would need to upgrade or replace existing controls to meet the NESHAP. Since those facilities currently route their scrubber effluent to cooling ponds, the effects of the rule would constitute a very small incremental change to current practices at those facilities. Given the relatively small contribution of scrubber effluent to the ponds and buffering effects of the complex mixture of chemicals in the ponds, there would be no observable effect resulting from changes to the air pollution controls.

#### D. Other Comments

##### 1. Determination of Major Source Status

*Comment.* One commenter noted that pursuant to 40 CFR 63.1 (b)(3), owners or operators of stationary sources potentially subject to the NESHAP must make an initial applicability determination concerning whether or not they are a major source and, therefore, subject to the NESHAP. The commenter acknowledged that this applicability determination is specifically made the responsibility of the owner or operator of a stationary source. The commenter asked that in order to ensure that the statements concerning the number of major sources contained in the December 27, 1996 preamble do not inadvertently lead to "prejudgments" on major source determinations, the Agency should specifically recognize, in the preamble

to the final NESHAP, that the calculations and the permit report used as the basis for the estimates referred to in the proposal notice are not the exclusive sources to be relied upon in making such major source determinations. The commenter requested the Agency to explicitly state that such determinations may be made upon any relevant data or information, including, but not limited to, the calculation procedure used by the Agency.

*Response.* It is a normal practice for the Agency to examine the impacts of its rules upon the environment and upon the regulated community. In its estimates of the impacts of the proposed rules, the Agency projected that 15 facilities may be major sources subject to this NESHAP. Those estimates are the Agency's expectations and do not constitute a determination of major source status for individual sources for purposes of Title V operating permits. However, the Agency does consider its methods of estimation to be sound and would carefully examine any analyses provided by sources that indicated lesser amounts of emissions. In particular, the argument by industry that silica or free ammonia remove all available HF is not supported by the FTIR data available for this rulemaking. If one could assume that sufficient quantities of reactants, such as silica and ammonia in this case, were present to theoretically drive a reaction to completion, real world actualities such as imperfect mixing or equilibrium limitations would prevent complete reactions of available ingredients from occurring. Thus, regardless of the silica or ammonia content of the emissions streams for this industry, it is expected that HF will be present in the final exhaust. The most definitive approach for sources to employ to determine their individual major source status would be for sources to directly measure for HAP compounds using FTIR via a test method validated per EPA Method 301.

##### 2. NSPS Exemption

*Comment.* One commenter observed that proposed §§ 63.610 and 63.630 would exempt any "process component" subject to the NESHAP from otherwise applicable NSPS. The commenter stated that the term "process component" is not defined in the proposed NESHAP or in the Act. In order to avoid any subsequent confusion on the scope of the NSPS exemption, the commenter recommended that the term "process component" be replaced by the term "affected source" or, alternatively, that the term "process component" be specifically defined.

*Response.* The Agency agrees with the commenter and has replaced the term "process component" with the term "affected source." Further, while reviewing the proposed exemption to determine its response to the commenter, the Agency found that the timing of the performance test as required in the general provisions could lead to further confusion as to a source's compliance status during the period between the compliance date of the NESHAP and completion of the performance test. The final rule has been re-worded to require the source to demonstrate compliance via a performance test by the compliance date for the NESHAP and to have a valid operating permit pursuant to Title V to qualify for the NSPS exemption.

##### 3. Draft Technical Support Document (TSD)

*Comment.* One commenter said that throughout the draft TSD, companies involved in the manufacture of phosphoric acid or the production of phosphate fertilizer were often misidentified. Also, the commenter noted that several of the production and other values given in the TSD were inaccurate and urged the Agency to use the most accurate and up-to-date values available. With regard to the discussion on nutrient carry-over and industry trends, the commenter cited some concerns and asked that the sections quoted in his comment letter be deleted from the draft TSD or revised.

One commenter provided additional information on the type of processes present at two plants in its jurisdiction. The commenter highlighted the production of a unique kind of GTSP from phosphate ore and limestone at one plant. That source makes "GTSP" by acidizing limestone with phosphoric acid and is different from the normal process which acidifies phosphate ore with phosphoric acid. The commenter said GTSP thus made from limestone does not fall under the definition stated in the proposed standards. The information about the second source noted a change of ownership.

*Response.* The original draft of the TSD was sent to outside reviewers, including the commenters, and was subsequently revised according to comments received. The draft TSD in the docket was current as of May 1995. The purpose of the draft TSD was to assemble the information upon which MACT could be established and various environmental and economic impacts could be assessed. The draft TSD also presented the Agency's methodologies and projections of the impacts of the NESHAP as they were envisioned at that



time. Subsequently, companies have been bought and sold and the productive output of the industry has changed. Newer information and analyses pertinent to the rulemaking have since been made available and added to the docket. Thus, given that the draft TSD has served its original purpose and any newer relevant information is in the docket, the Agency will not revise the draft TSD.

#### 4. Applicability Diammonium and/or Monoammonium Phosphate (DAP/ MAP) Emission Limits

*Comment.* One commenter described one of his sources that manufactures MAP/DAP using thermal process phosphoric acid, instead of WPPA. The commenter cited the information in the TSD to support his observation that information available to the Agency indicate that HAP emissions are a concern only in those instances where WPPA is used to manufacture DAP/ MAP. The commenter requested that the Agency clarify the applicability of the NESHAP to exclude those sources not using WPPA to manufacture DAP/ MAP.

*Response.* The Agency agrees with the commenter and the regulations in subpart BB have been revised by incorporating language the commenter provided.

#### 5. Applicability—Research and Development Facilities

*Comment.* One commenter recommended that the Agency include an exemption for research and development (R&D) facilities. The commenter cited section 112(c)(7) of the Clean Air Act (the Act) and its direction to establish a separate source category for R&D facilities as necessary to ensure equitable treatment of such facilities. The commenter cited other recent NESHAP that have included R&D exemptions and said that this rulemaking needed to include such an exemption for consistency. The commenter suggested that the following language be added to the definitions contained in the rule: "Research and development activities means (1) activities conducted at a laboratory to analyze air, soil, water or product samples for contaminants, environmental impact, or quality control, (2) activities conducted to test more efficient production processes or methods for preventing or reducing adverse environmental impacts, provided that the activities do not include the production of an intermediate or final product for sale or exchange for commercial profit, except in a de minimis manner, and (3) activities conducted at a research or

laboratory facility that is operated under the close supervision of technically trained personnel the primary purpose of which is to conduct research and development into new processes and products and that is not engaged in the manufacture of products for sale or exchange for commercial profit, except in a de minimis manner."

*Response.* The Agency agrees with the commenter and has added appropriate language, including an R&D facility definition similar to the commenter's, into the rules. The Agency plans to issue a NESHAP applicable to R&D facilities at a later date.

#### 6. Notification

*Comment.* One commenter recommended that notification, recordkeeping and reporting requirements should be coextensive with those required under the current NSPS. The proposed rules would apply §§ 63.9 and 63.10 of the NESHAP general provisions with their recordkeeping and reporting that in the commenter's opinion is neither appropriate nor justified. The commenter said the record of the NESHAP general provisions rulemaking makes it clear that the notification, recordkeeping and reporting requirements were developed to address situations where the NESHAP for a particular chemical or process would be the initial federal regulation addressing that chemical or process. The commenter said that phosphoric acid manufacturing and phosphate fertilizer production facilities have long been subject to federal regulation under the NSPS and State regulation under provisions similar to the NSPS and owner/operators of regulated sources and government regulators are familiar and adept with these preexisting notification, recordkeeping and reporting requirements. The commenter recommended that notification, recordkeeping and reporting requirements be coextensive with the requirements of the pre-existing NSPS and submitted that such an approach is consistent with 40 CFR 63.10(a)(7) which permits owners and operators subject to both NSPS and NESHAP, along with the Administrator or the state permitting authority, to mutually agree on a common schedule for submitting required reports. The commenter said his recommendation was also consistent with 40 CFR 63.10(f) which permits the Administrator to waive the recordkeeping and reporting requirements of the NESHAP general provisions.

*Response.* The Agency discussion in the preambles proposing and

promulgating the part 63 general provisions did not support the commenter's points concerning their application to sources subject to prior regulations. Instead, the discussions made clear that the part 63 requirements, while patterned after those parts 60 and 61, were made more extensive because of the need to incorporate specific legal requirements added by the 1990 Amendments to the Act. The Agency also mentioned the importance of maintaining consistent requirements for the various source categories affected by NESHAP and minimizing case-by-case negotiations on timing and content of notification and recordkeeping activities. Last, the Agency does not concur with the commenter's interpretation of 40 CFR 63.10(a)(7). That language is specifically aimed at instances where affected sources are subject to both NSPS and NESHAP. Since this rule specifically exempts those sources subject to its requirements from duplicate coverage by NSPS, the language of § 63.10(a)(7) is not applicable.

*Comment.* One commenter asked for the intent of §§ 63.608 and 63.628 to be clarified. The commenter said proposed §§ 63.608 and 63.628 specified that particular reporting requirements of § 63.10 would be applicable to owners and operators of phosphoric acid manufacturing and phosphate fertilizer production facilities. Furthermore, proposed §§ 63.604 and 63.605 specified the monitoring requirements applicable to owners and operators of such facilities. Certain of the monitoring requirements otherwise applicable under 40 CFR 63.8 were not made applicable to phosphoric acid manufacturing and phosphate fertilizer production facilities. Concomitantly, the reporting requirements of § 63.10 associated with those monitoring requirements also were not made applicable to such facilities by proposed §§ 63.608 and 63.628. However, the excess emissions report which was made applicable to such facilities by proposed §§ 63.608(a)(2) and 63.628(a)(2) was required, by the NESHAP general provisions, to include information concerning certain of the monitoring requirements not made applicable to phosphoric acid manufacturing and phosphate fertilizer production facilities. The commenter asked that the Agency's intent be made specific in the final NESHAP so that it would be clear that the excess emissions report required by proposed §§ 63.608(a)(2) and 63.628(a)(2) is to include only the information relevant to the monitoring requirements



specifically imposed on phosphoric acid manufacturing and phosphate fertilizer production facilities pursuant to proposed §§ 63.604 and 63.624.

*Response.* The Agency explored the commenter's concerns and came to agree that the coordination of the general provisions requirements for notification, recordkeeping, reporting, and compliance dates as proposed could be improved. The sections of the rule addressing those points have been restructured and a table has been added to specifically state the applicability of the components of the general provisions. The timing of the initial performance test relative to the compliance date and the exemption from new source performance standards were further clarified to eliminate ambiguity. These changes should ease implementation via Title V operating permits.

## V. Administrative Requirements

### A. Docket

The docket is an organized and complete file of all the information considered by EPA in the development of this rulemaking. The docket is a dynamic file, because material is added throughout the rulemaking development. The docketing system is intended to allow members of the public and industries involved to readily identify and locate documents so that they can effectively participate in the rulemaking process. Along with the proposed and promulgated standards and their preambles, the contents of the docket will serve as the record in the case of judicial review. (See section 307(d)(7)(A) of the Act.)

### B. Executive Order 12866

Under Executive Order 12866 (58 FR 51735 (October 4, 1993)), the Agency must determine whether the regulatory action is "significant" and therefore subject to review by the Office of Management and Budget (OMB), and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may: (1) have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities; (2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency; (3) materially alter the budgetary impact of entitlements, grants, user fees, or loan programs, or the rights and obligation of

recipients thereof; or (4) raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles set forth in the Executive Order.

It has been determined that this rule is not a "significant regulatory action" under the terms of Executive Order 12866 and is therefore not subject to OMB review. The nationwide capital and annualized costs of the NESHAP, including emission controls and associated monitoring equipment, are estimated at \$1.4 million and \$862,000/yr, respectively.

### C. Enhancing the Intergovernmental Partnership Under Executive Order 12875

Under Executive Order 12875, the Agency may not issue a regulation that is not required by statute and that creates a mandate upon a State, local or tribal government, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by those governments, or EPA consults with those governments. If the Agency complies by consulting, Executive Order 12875 requires the Agency to provide to the Office of Management and Budget a description of the extent of the Agency's prior consultation with representatives of affected State, local and tribal governments, the nature of their concerns, copies of any written communications from the governments, and a statement supporting the need to issue the regulation. In addition, Executive Order 12875 requires EPA to develop an effective process permitting elected officials and other representatives of State, local and tribal governments "to provide meaningful and timely input in the development of regulatory proposals containing significant unfunded mandates."

Today's rule does not create a mandate on State, local or tribal governments. The rule does not impose any enforceable duties on State, local or tribal governments, because they do not own or operate any sources subject to this rule and therefore are not required to purchase control systems to meet the requirements of this rule. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule. Nevertheless, in developing this rule, EPA consulted with States to enable them to provide meaningful and timely input in the development of this rule.

### D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4, establishes requirements for

Federal agencies to assess the effects of their regulatory actions on State, local and tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "Federal mandates" that may result in expenditures by State, local and tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least costly, most cost-effective or least burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before the EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating and advising small governments on compliance with the regulatory requirements.

The EPA has determined that these final rules do not contain a Federal mandate that may result in expenditures of \$100 million or more for State, local and tribal governments, in the aggregate, or the private sector in any one year. The EPA projects that annual economic impacts would be far less than \$100 million. Thus, today's final rules are not subject to the requirements of sections 202 and 205 of the UMRA. In addition, the EPA has determined that these final rules contain no regulatory requirements that might significantly or uniquely affect small governments because they do not impose any enforceable duties on small governments; such governments own or operate no sources subject to these proposed rules and therefore would not be required to purchase control systems to meet the requirements of these proposed rules.

### E. Regulatory Flexibility

The Agency has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with this final rule. The Agency has also determined that this rule will not have a significant economic impact on a substantial number of small entities. The Agency has found that two of the twenty-one firms that potentially could be subject to the standards are small firms. Of the two, data indicate that one is an area source which would not be covered by the standards. The second source could be major and subject to the requirements of the standards. Information available to the Agency shows that the second source is able to achieve the control levels of the NESHAP using existing equipment. The testing, monitoring, recordkeeping and reporting requirements are essentially identical to current requirements and, thus, should cause little or no change in these burdens.

### F. Submission to Congress and the Comptroller General

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, generally provides that before a rule may take effect, the agency promulgating the rule must submit a rule report, which includes a copy of the rule, to each House of the Congress and to the Comptroller General of the United States. The Agency will submit a report containing this rule and other required information to the U.S. Senate, the U.S. House of Representatives, and the Comptroller General of the United States prior to publication of the rule in the **Federal Register**. This rule is not a "major rule" as defined by 5 U.S.C. 804(2). This rule will be effective on the date of publication in the **Federal Register**.

### G. Paperwork Reduction Act

The Office of Management and Budget (OMB) has approved the information collection requirements contained in this rule under the provisions of the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* and has assigned OMB control number 2060-0361.

The information to be collected includes the results of annual performance testing to be conducted to demonstrate compliance with the emissions limits in the rules. At the time that performance testing will be performed, sources will be required to measure and record operating parameters for the processes and control devices. Following the performance testing, sources will be required under

authority of the Clean Air Act to monitor and record operating parameters to assure that they were maintained within approved ranges, based upon values determined during the performance tests. One source will be required to monitor potential emissions from equipment leaks and to keep records of leaks detected and repairs made to correct leaks. The purpose of the monitoring and recordkeeping requirements is to provide implementing agencies information to assure that MACT is implemented on an ongoing basis.

The Agency estimated the projected cost and hour burden of the standards. The average annual reporting burden was estimated to be 132 hours per response. There will be fifteen likely respondents and reports will be required twice a year. The total burden would equate to 3790 hours per year nationwide and the corresponding cost was estimated to be \$121,773 per year. The total capital cost of the monitoring devices was estimated to be \$564,200 of which the major cost would be for the installation of sensors to measure and record the flow of scrubbing liquid to the control devices. The annualized cost of that capital would be \$53,200 per year and the operation and maintenance of the monitoring equipment was estimated as \$13,300 per year. Thus, the total annualized capital and operation and maintenance costs were estimated to be \$66,500 per year.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purposes of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to be able to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information. An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9 and 48 CFR Chapter 15. EPA is amending the table in 40 CFR part 9, §9.1 of currently approved ICR control numbers issued by OMB for various regulations to list the information

requirements contained in this final rule.

### H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA), directs all Federal agencies to use voluntary consensus standards in regulatory and procurement activities unless to do so would be inconsistent with applicable law or otherwise impracticable. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, and business practices) developed or adapted by one or more voluntary consensus bodies. The NTTAA requires Federal agencies to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

Consistent with the requirements of the NTTAA, today's rulemaking incorporates the analytical methods of two consensus standard bodies. Instead of developing its own methods for determining the phosphate content of feedstocks to the processes covered by the standards, the Agency is incorporating by reference into today's rules certain analytical protocols of the Association of Official Analytical Chemists and of The Association of Florida Phosphate Chemists.

Also, consistent with the NTTAA, the EPA conducted a search to identify voluntary consensus standards for emissions test methods. The search identified 17 voluntary consensus standards that appeared to have possible use in lieu of EPA standard reference methods. However, after reviewing available standards, EPA determined that 12 of the candidate consensus standards identified for measuring emissions of the HAPs or surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data and other important technical and policy considerations. Five of the remaining candidate consensus standards are new standards under development that EPA plans to follow, review and consider adopting at a later date. This rule requires standard EPA methods known to the industry and States. Approved alternative methods also may be used with prior EPA approval.

### I. Executive Order 13045

Executive Order 13045: "Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885,

April 23, 1997) applies to any rule that: (1) is determined to be "economically significant" as defined under E.O. 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the Agency must evaluate the environmental health or safety effects of the planned rule on children, and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

This final rule is not subject to E.O. 13045, entitled Protection of Children from Environmental Health Risks and Safety Risks (62 FR 19885, April 23, 1997), because it does not involve decisions on environmental health risks or safety risks that may disproportionately affect children.

**J. Executive Order 13084**

Under Executive Order 13084, EPA may not issue a regulation that is not required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, unless the Federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments, or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires EPA to provide to the Office of Management and Budget, in a separately identified section of the preamble to the rule, a description of the extent of EPA's prior consultation with representatives of affected tribal governments, a summary of the nature of their concerns, and a statement supporting the need to issue the regulation. In addition, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's rule does not significantly or uniquely affect the communities of Indian tribal governments. The rule does not impose any enforceable duties on the communities of Indian tribal governments, because they do not own or operate any sources subject to this rule and therefore are not required to purchase control systems to meet the requirements of this rule. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

**List of Subjects in 40 CFR Part 63**

Environmental protection, Air pollution control, Incorporation by reference, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: April 14, 1999.

**Carol M. Browner,**  
*Administrator.*

For the reasons set out in the preamble, parts 9 and 63 of title 40, chapter I of the Code of Federal Regulations are amended as follows:

**PART 9—OMB APPROVALS UNDER THE PAPERWORK REDUCTION ACT**

1. The authority citation for part 9 continues to read as follows:

**Authority:** 7 U.S.C. 135 *et seq.*, 136–136y; 15 U.S.C. 2001, 2003, 2005, 2006, 2601–2671; 21 U.S.C. 331j, 346a, 348; 31 U.S.C. 9701; 33 U.S.C. 1251 *et seq.*, 1311, 1313d, 1314, 1318, 1321, 1326, 1330, 1342, 1344, 1345 (d) and (e), 1361; E.O. 11735, 38 FR 21243, 3 CFR, 1971–1975 Comp. p. 973; 42 U.S.C. 241, 242b, 243, 246, 300f, 300g, 300g–1, 300g–2, 300g–3, 300g–4, 300g–5, 300g–6, 300j–1, 300j–2, 300j–3, 300j–4, 300j–9, 1857 *et seq.*, 6901–6992k, 7401–7671q, 7542, 9601–9657, 11023, 11048.

2. In § 9.1 the table is amended by adding new entries under the indicated heading in numerical order to read as follows:

**§ 9.1 OMB approvals under the Paperwork Reduction Act.**

40 CFR citation	OMB control No.
* * * * *	
National Emission Standards for Hazardous Air Pollutants for Source Categories <sup>3</sup>	
* * * * *	
63.602–63.603 .....	2060–0361
63.605–63.608 .....	2060–0361
63.625–63.628 .....	2060–0361
63.630 .....	2060–0361
* * * * *	

<sup>3</sup>The ICRs referenced in this section of the table encompass the applicable general provisions contained in 40 CFR part 63, subpart A, which are not independent information collection requirements.

**PART 63—NATIONAL EMISSION STANDARDS FOR HAZARDOUS AIR POLLUTANTS FOR SOURCE CATEGORIES**

1. The authority for part 63 continues to read as follows:

**Authority:** 42 U.S.C. 7401 *et seq.*

2. Section 63.14 is amended by adding new paragraphs (g) and (h) to read as follows:

**§ 63.14 Incorporation by Reference.**

\* \* \* \* \*

(g) The materials listed below are available for purchase from AOAC International, Customer Services, Suite 400, 2200 Wilson Boulevard, Arlington, Virginia, 22201–3301, Telephone (703) 522–3032, Fax (703) 522–5468.

(1) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(2) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(3) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(4) AOAC Official Method 957.02 Phosphorus (Total) in Fertilizers, Preparation of Sample Solution, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(5) AOAC Official Method 929.01 Sampling of Solid Fertilizers, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(6) AOAC Official Method 929.02 Preparation of Fertilizer Sample, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(7) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method, Sixteenth edition, 1995, IBR approved for § 63.626(d)(3)(vi).

(h) The materials listed below are available for purchase from The Association of Florida Phosphate Chemists, P.O. Box 1645, Bartow, Florida, 33830, Book of Methods Used and Adopted By The Association of Florida Phosphate Chemists, Seventh Edition 1991, IBR.

(1) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(2) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus—P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method A—Volumetric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(3) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus—P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method B—Gravimetric Quimociac Method, IBR

approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(4) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus-P<sub>2</sub>O<sub>5</sub> or Ca<sub>3</sub>(PO<sub>4</sub>)<sub>2</sub>, Method C—Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii) and § 63.626(c)(3)(ii).

(5) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method A—Volumetric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(6) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method B—Gravimetric Quimociac Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

(7) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method C—Spectrophotometric Method, IBR approved for § 63.606(c)(3)(ii), § 63.626(c)(3)(ii), and § 63.626(d)(3)(v).

\* \* \* \* \*

3. Part 63 is amended by adding subpart AA consisting of §§ 63.600 through 63.610 to read as follows:

**Subpart AA—National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants**

Sec.

- 63.600 Applicability.
- 63.601 Definitions.
- 63.602 Standards for existing sources.
- 63.603 Standards for new sources.
- 63.604 Operating requirements.
- 63.605 Monitoring requirements.
- 63.606 Performance tests and compliance provisions.
- 63.607 Notification, recordkeeping, and reporting requirements.
- 63.608 Applicability of general provisions.
- 63.609 Compliance dates.
- 63.610 Exemption from new source performance standards.

**Appendix A to Subpart AA of Part 63—Applicability of General Provisions (40 CFR Part 63, Subpart A) to Subpart AA**

**Subpart AA—National Emission Standards for Hazardous Air Pollutants From Phosphoric Acid Manufacturing Plants**

**§ 63.600 Applicability.**

(a) Except as provided in paragraphs (c) and (d) of this section, the requirements of this subpart apply to the owner or operator of each phosphoric acid manufacturing plant.

(b) The requirements of this subpart apply to emissions of hazardous air pollutants (HAPs) emitted from the following new or existing affected sources at a phosphoric acid manufacturing plant:

(1) Each wet-process phosphoric acid process line. The requirements of this subpart apply to the following emission points which are components of a wet-process phosphoric acid process line: reactors, filters, evaporators, and hot wells;

(2) Each evaporative cooling tower at a phosphoric acid manufacturing plant;

(3) Each phosphate rock dryer located at a phosphoric acid manufacturing plant;

(4) Each phosphate rock calciner located at a phosphoric acid manufacturing plant;

(5) Each superphosphoric acid process line. The requirements of this subpart apply to the following emission points which are components of a superphosphoric acid process line: evaporators, hot wells, acid sumps, and cooling tanks; and

(6) Each purified acid process line. The requirements of this subpart apply to the following emission points which are components of a purified phosphoric acid process line: solvent extraction process equipment, solvent stripping and recovery equipment, seal tanks, carbon treatment equipment, cooling towers, storage tanks, pumps and process piping.

(c) The requirements of this subpart do not apply to the owner or operator of a new or existing phosphoric acid manufacturing plant that is not a major source as defined in § 63.2.

(d) The provisions of this subpart do not apply to research and development facilities as defined in § 63.601.

**§ 63.601 Definitions.**

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, or in this section as follows:

*Equivalent P<sub>2</sub>O<sub>5</sub> feed* means the quantity of phosphorus, expressed as phosphorous pentoxide, fed to the process.

*Evaporative cooling tower* means an open water recirculating device that uses fans or natural draft to draw or force ambient air through the device to remove heat from process water by direct contact.

*Exceedance* means a departure from an indicator range established under this subpart, consistent with any averaging period specified for averaging the results of the monitoring.

*HAP metals* mean those metals and their compounds (in particulate or volatile form) that are included on the

list of hazardous air pollutants in section 112 of the Clean Air Act. HAP metals include, but are not limited to: antimony, arsenic, beryllium, cadmium, chromium, lead, manganese, nickel, and selenium expressed as particulate matter as measured by the methods and procedures in this subpart or an approved alternative method. For the purposes of this subpart, HAP metals are expressed as particulate matter as measured by 40 CFR part 60, appendix A, Method 5.

*Phosphate rock calciner* means the equipment used to remove moisture and organic matter from phosphate rock through direct or indirect heating.

*Phosphate rock dryer* means the equipment used to reduce the moisture content of phosphate rock through direct or indirect heating.

*Phosphate rock feed* means all material entering any phosphate rock dryer or phosphate rock calciner including moisture and extraneous material as well as the following ore materials: fluorapatite, hydroxylapatite, chlorapatite, and carbonateapatite.

*Purified phosphoric acid process line* means any process line which uses a HAP as a solvent in the separation of impurities from the product acid for the purposes of rendering that product suitable for industrial, manufacturing or food grade uses.

*Research and development facility* means research or laboratory operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and where the facility is not engaged in the manufacture of products for commercial sale in commerce or other off-site distribution, except in a de minimis manner.

*Superphosphoric acid process line* means any process line which concentrates wet-process phosphoric acid to 66 percent or greater P<sub>2</sub>O<sub>5</sub> content by weight.

*Total fluorides* means elemental fluorine and all fluoride compounds, including the HAP hydrogen fluoride, as measured by reference methods specified in 40 CFR part 60, appendix A, Method 13 A or B, or by equivalent or alternative methods approved by the Administrator pursuant to § 63.7(f).

*Wet process phosphoric acid process line* means any process line manufacturing phosphoric acid by reacting phosphate rock and acid.

**§ 63.602 Standards for existing sources.**

(a) *Wet process phosphoric acid process line*. On and after the date on which the performance test required to

be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 10.0 gram/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.020 lb/ton).

(b) *Superphosphoric acid process line.*

(1) *Vacuum evaporation process.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 5.0 gram/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.010 lb/ton).

(2) *Submerged combustion process.*

On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 100.0 gram/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.20 lb/ton).

(c) *Phosphate rock dryer.* On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain particulate matter in excess of 0.10750 kilogram/metric ton of phosphate rock feed (0.2150 lb/ton).

(d) *Phosphate rock calciner.* On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain particulate matter in excess of 0.1380 gram per dry standard cubic meter (g/dscm) [0.060 grains per dry standard cubic foot (gr/dscf)].

(e) *Evaporative cooling tower.* No owner or operator shall introduce into any evaporative cooling tower any liquid effluent from any wet scrubbing device installed to control emissions from process equipment. Each owner or operator of an affected source subject to this paragraph (e) must certify to the Administrator annually that he/she has complied with the requirements contained in this section.

(f) *Purified phosphoric acid process line.*

(1) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of subpart H of this part.

(2) For any existing purified phosphoric acid process line, any of the following shall constitute a violation of this subpart:

(i) A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of twenty parts per million for each product acid stream.

(ii) A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of thirty parts per million for each raffinate stream.

(iii) A daily average chiller stack exit gas stream temperature in excess of fifty degrees Fahrenheit.

#### § 63.603 Standards for new sources.

(a) *Wet process phosphoric acid process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 6.750 gram/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.01350 lb/ton).

(b) *Superphosphoric acid process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 4.350 gram/metric ton of equivalent P<sub>2</sub>O<sub>5</sub> feed (0.00870 lb/ton).

(c) *Phosphate rock dryer.* On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain particulate matter in excess of 0.030 kilogram/metric ton per megagram of phosphate rock feed (0.060 lb/ton).

(d) *Phosphate rock calciner.* On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain particulate matter in excess of 0.0920 gram per dry standard cubic meter (g/dscm) [0.040 grain per dry standard cubic foot (gr/dscf)].

(e) *Evaporative cooling tower.* No owner or operator shall introduce into

any evaporative cooling tower any liquid effluent from any wet scrubbing device installed to control emissions from process equipment. Each owner or operator of an affected source subject to this paragraph (e) must certify to the Administrator annually that he/she has complied with the requirements contained in this section.

(f) *Purified phosphoric acid process line.*

(1) Each owner or operator subject to the provisions of this subpart shall comply with the provisions of subpart H of this part.

(2) For any new purified phosphoric acid process line, any of the following shall constitute a violation of this subpart:

(i) A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of twenty parts per million for each product acid stream.

(ii) A thirty day average of daily concentration measurements of methyl isobutyl ketone in excess of thirty parts per million for each raffinate stream.

(iii) A daily average chiller stack exit gas stream temperature in excess of fifty degrees Fahrenheit.

#### § 63.604 Operating requirements.

On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.606 is required to be completed, the owner/operator using a wet scrubbing emission control system must maintain three-hour averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of § 63.605(d)(1) or (2).

#### § 63.605 Monitoring requirements.

(a) Each owner or operator of a new or existing wet-process phosphoric acid process line, superphosphoric acid process line, phosphate rock dryer, or phosphate rock calciner subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of ±5 percent over its operating range.

(b)(1) Each owner or operator of a new or existing wet-process phosphoric acid process line or superphosphoric acid process line subject to the provisions of this subpart shall maintain a daily record of equivalent P<sub>2</sub>O<sub>5</sub> feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for

measuring mass flowrate which meets the requirements of paragraph (a) of this section and then by proceeding according to § 63.606(c)(3).

(2) Each owner or operator of a new or existing phosphate rock calciner or phosphate rock dryer subject to the provisions of this subpart shall maintain a daily record of phosphate rock feed by determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (a) of this section.

(c) Each owner or operator of a new or existing wet-process phosphoric acid process line, superphosphoric acid process line, phosphate rock dryer or phosphate rock calciner using a wet scrubbing emission control system shall install, calibrate, maintain, and operate the following monitoring systems:

(1) A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

(2) A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

(d) Following the date on which the performance test required in § 63.606 is completed, the owner or operator of a new or existing affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in this subpart must establish allowable ranges for operating parameters using the methodology of either paragraph (d)(1) or (2) of this section:

(1) The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is  $\pm 20$  percent of the baseline average value determined as a requirement of § 63.606(c)(4), (d)(4), or (e)(2). The Administrator retains the right to reduce the  $\pm 20$  percent adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but, in no instance shall the

adjustment be reduced to less than  $\pm 10$  percent. The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most recent performance test. The baseline average values used for compliance shall be based on the values determined during the most recent performance test. The new baseline average value shall be effective on the date following the performance test.

(2) The owner or operator of any new or existing affected source shall establish, and provide to the Administrator for approval, allowable ranges of baseline average values for the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with this subpart. Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in this subpart and established in the manner required in § 63.606(c)(4), (d)(4), or (e)(2). As an alternative, the owner or operator can establish the allowable ranges of baseline average values using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in this subpart and established in the manner required in § 63.606(c)(4), (d)(4), or (e)(2). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges of baseline average values developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges of baseline values. When a source using the methodology of this paragraph is retested, the owner operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters from previous tests. Any new allowable ranges of baseline average values resulting from the most recent performance test shall be effective on the date following the retest. Until changes to allowable ranges of baseline average values are approved by the Administrator, the allowable ranges for use in § 63.604 shall be based upon the range of baseline average values proposed for approval.

(e) Each owner or operator of a new or existing purified phosphoric acid process line shall:

(1) Install, calibrate, maintain, and operate a monitoring system which continuously measures and permanently records the stack gas exit temperature for each chiller stack.

(2) Measure and record the concentration of methyl isobutyl ketone in each product acid stream and each raffinate stream once daily.

#### § 63.606 Performance tests and compliance provisions.

(a)(1) On or before the applicable compliance date in § 63.609 and once per annum thereafter, each owner or operator of a phosphoric acid manufacturing plant shall conduct a performance test to demonstrate compliance with the applicable emission standard for each existing wet-process phosphoric acid process line, superphosphoric acid process line, phosphate rock dryer, and phosphate rock calciner. The owner or operator shall conduct the performance test according to the procedures in subpart A of this part and in this section.

(2) As required by § 63.7(a)(2) and once per annum thereafter, each owner or operator of a phosphoric acid manufacturing plant shall conduct a performance test to demonstrate compliance with the applicable emission standard for each new wet-process phosphoric acid process line, superphosphoric acid process line, phosphate rock dryer, and phosphate rock calciner. The owner or operator shall conduct the performance test according to the procedures in subpart A of this part and in this section.

(b) In conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR part 60, appendix A, or other methods and procedures as specified in this section, except as provided in § 63.7(f).

(c) Each owner or operator of a new or existing wet-process phosphoric acid process line or superphosphoric acid process line shall determine compliance with the applicable total fluorides standards in § 63.602 or § 63.603 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 (lb/ton) of equivalent P<sub>2</sub>O<sub>5</sub> 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  $P_2O_5$  feed rate, metric ton/hr (ton/hr).

$K$  = conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B (40 CFR part 60, appendix A) 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. If Method 13B is used, the fusion of the filtered material described in Section 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in section 7.3.3 and 7.3.4. in Method 13 A, may be omitted. 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 using the following equation:

$$P = M_p R_p$$

Where:

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

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

(i) The accountability system described in § 63.605(a) and (b) shall be used to determine the mass flow rate ( $M_p$ ) of the phosphorus-bearing feed.

(ii) The  $P_2O_5$  content ( $R_p$ ) of the feed shall be determined using as appropriate the following methods (incorporated by reference—see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:

(A) Section IX, Methods of Analysis For Phosphate Rock, No. 1 Preparation of Sample.

(B) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method A-Volumetric Method.

(C) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method B-Gravimetric Quimociac Method.

(D) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus- $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method C-Spectrophotometric Method.

(E) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- $P_2O_5$ , Method A-Volumetric Method.

(F) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate,

Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- $P_2O_5$ , Method B-Gravimetric Quimociac Method.

(G) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus- $P_2O_5$ , Method C-Spectrophotometric Method.

(4) To comply with § 63.605(d) (1) or (2), the owner or operator shall use the monitoring systems in § 63.605(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of § 63.605(d) (1) or (2).

(d) Each owner or operator of a new or existing phosphate rock dryer shall demonstrate compliance with the particulate matter standards in § 63.602 or § 63.603 as follows:

(1) The emission rate ( $E$ ) of particulate matter shall be computed for each run using the following equation:

$$E = (C_s Q_{sd}) / (P K)$$

Where:

$E$  = emission rate of particulate matter, kg/Mg (lb/ton) of phosphate rock feed.

$C_s$  = concentration of particulate matter, g/dscm (g/dscf).

$Q_{sd}$  = volumetric flow rate of effluent gas, dscm/hr (dscf/hr).

$P$  = phosphate rock feed rate, Mg/hr (ton/hr).

$K$  = conversion factor, 1000 g/kg (453.6 g/lb).

(2) Method 5 (40 CFR part 60, appendix A) shall be used to determine the particulate matter concentration ( $c_s$ ) and volumetric flow rate ( $Q_{sd}$ ) of the effluent gas. The sampling time and sample volume for each run shall be at least 60 minutes and 0.85 dscm (30 dscf).

(3) The system described in § 63.605(a) shall be used to determine the phosphate rock feed rate ( $P$ ) for each run.

(4) To comply with § 63.605(d) (1) or (2), the owner or operator shall use the monitoring systems in § 63.605(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the particulate matter runs. The arithmetic average of the one-hour averages determined during the three

test runs shall be used as the baseline average values for the purposes of § 63.605(d) (1) or (2).

(e) Each owner or operator of a new or existing phosphate rock calciner shall demonstrate compliance with the particulate matter standards in §§ 63.602 and 63.603 as follows:

(1) Method 5 (40 CFR part 60, appendix A) shall be used to determine the particulate matter concentration. The sampling time and volume for each test run shall be at least 60 minutes and 1.70 dscm.

(2) To comply with § 63.605(d) (1) or (2), the owner or operator shall use the monitoring systems in § 63.605(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the particulate matter runs. The arithmetic average of the one-hour averages determined during the three test runs shall be used as the baseline average values for the purposes of § 63.605(d) (1) or (2).

#### § 63.607 Notification, recordkeeping, and reporting requirements.

(a) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in § 63.9.

(b) Each owner or operator subject to the requirements of this subpart shall comply with the recordkeeping requirements in § 63.10.

(c) The owner or operator of an affected source shall comply with the reporting requirements specified in § 63.10 as follows:

(1) *Performance test report.* As required by § 63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in § 63.9.

(2) *Excess emissions report.* As required by § 63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in § 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in § 63.10.



(3) *Summary report.* If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in § 63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.

(4) If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

**§ 63.608 Applicability of general provisions.**

The requirements of the general provisions in subpart A of this part that are applicable to the owner or operator subject to the requirements of this subpart are shown in appendix A to this subpart.

**§ 63.609 Compliance dates.**

(a) Each owner or operator of an existing affected source at a phosphoric acid manufacturing plant shall achieve compliance with the requirements of this subpart no later than June 10, 2002. Notwithstanding the requirements of § 63.7(a)(2)(iii), each owner or operator of an existing source at an affected existing phosphoric acid manufacturing plant shall fulfill the applicable requirements of § 63.606 no later than June 10, 2002.

(b) Each owner or operator of a phosphoric acid manufacturing plant that commences construction or

reconstruction of an affected source after December 27, 1996 shall achieve compliance with the requirements of this subpart upon startup of operations or by June 10, 1999, whichever is later.

**§ 63.610 Exemption from new source performance standards.**

Any affected source subject to the provisions of this subpart is exempted from any otherwise applicable new source performance standard contained in 40 CFR part 60, subpart T, subpart U or subpart NN. To be exempt, a source must have a current operating permit pursuant to Title V of the Act and the source must be in compliance with all requirements of this subpart. For each affected source, this exemption is effective upon the date that the owner or operator demonstrates to the Administrator that the requirements of §§ 63.604, 63.605 and 63.606 have been met.

APPENDIX A TO SUBPART AA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART AA

40 CFR citation	Requirement	Applies to subpart AA	Comment
63.1(a)(1) through (4)	General Applicability	Yes.	
63.1(a)(5)		No	[Reserved].
63.1(a)(6) through (8)		Yes.	
63.1(a)(9)		No	[Reserved].
63.1(a)(10) through (14)		Yes.	
63.1(b)	Initial Applicability Determination	Yes.	
63.1(c)(1)	Applicability After Standard Established	Yes.	
63.1(c)(2)		Yes.	Some plants may be area sources.
63.1(c)(3)		No	[Reserved].
63.1(c)(4) and (5)		Yes.	
63.1(d)		No	[Reserved].
63.1(e)	Applicability of Permit Program	Yes.	
63.2	Definitions	Yes.	Additional definitions in § 63.601.
63.3	Units and Abbreviations	Yes.	
63.4(a)(1) through (3)	Prohibited Activities	Yes.	
63.4(a)(4)		No	[Reserved].
63.4(a)(5)		Yes.	
63.4(b) and (c)	Circumvention/Severability	Yes.	
63.5(a)	Construction/Reconstruction Applicability	Yes.	
63.5(b)(1)	Existing, New, Reconstructed Sources Requirements.	Yes.	
63.5(b)(2)		No	[Reserved].
63.5(b)(3) through (6)		Yes.	
63.5(c)		No	[Reserved].
63.5(d)	Application for Approval of Construction/ Reconstruction.	Yes.	
63.5(e)	Approval of Construction/Reconstruction	Yes.	
63.5(f)	Approval of Construction/Reconstruction Based on State Review.	Yes.	
63.6(a)	Compliance with Standards and Maintenance Applicability.	Yes.	
63.6(b)(1) through (5)	New and Reconstructed Sources Dates	Yes.	See also § 63.609.
63.6(b)(6)		No	[Reserved].
63.6(b)(7)		Yes.	
63.6(c)(1)	Existing Sources Dates	Yes.	§ 63.609 specifies dates.
63.6(c)(2)		Yes.	
63.6(c)(3) and (4)		No	[Reserved].
63.6(c)(5)		Yes.	
63.6(d)		No	[Reserved].
63.6(e)(1) and (2)	Operation & Maintenance Requirements	Yes.	§ 63.604 specifies additional requirements.



## APPENDIX A TO SUBPART AA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART AA—Continued

40 CFR citation	Requirement	Applies to subpart AA	Comment
63.6(e)(3)	Startup, Shutdown, and Malfunction Plan	Yes.	§ 63.604 specifies additional requirements.
63.6(f)	Compliance with Emission Standards	Yes.	§§ 63.602 through 605 specify additional requirements.
63.6(g)	Alternative Standard	Yes.	
63.6(h)	Compliance with Opacity/VE Standards	No	Subpart AA does not include VE/opacity standards.
63.6(i)(1) through (14)	Extension of Compliance	Yes.	
63.6(i)(15)		No	[Reserved].
63.6(i)(16)		Yes.	
63.6(j)	Exemption from Compliance	Yes.	
63.7(a)	Performance Test Requirements Applicability	Yes.	§ 63.609(a) applies rather than § 63.7(a)(2)(iii).
63.7(b)	Notification	Yes.	
63.7(c)	Quality Assurance/Test Plan	Yes.	
63.7(d)	Testing Facilities	Yes.	
63.7(e)	Conduct of Tests	Yes.	§§ 63.604 and 63.605 specify additional requirements.
63.7(f)	Alternative Test Method	Yes.	
63.7(g)	Data Analysis	Yes.	
63.7(h)	Waiver of Tests	Yes.	
63.8(a)(1)	Monitoring Requirements Applicability	Yes.	
63.8(a)(2)		No	Subpart AA does not require CMS performance specifications.
63.8(a)(3)		No	[Reserved].
63.8(a)(4)		Yes.	
63.8(b)	Conduct of Monitoring	Yes.	
63.8(c)(1) through (4)	CMS Operation/Maintenance	Yes.	
63.8(c)(5) through (8)		No	Subpart AA does not require COMS/CEMS or CMS performance specifications.
63.8(d)	Quality Control	Yes.	
63.8(e)	CMS Performance Evaluation	No	Subpart AA does not require CMS performance evaluations
63.8(f)(1) through (5)	Alternative Monitoring Method	Yes.	
63.8(f)(6)	Alternative to RATA Test	No	Subpart AA does not require CEMS.
63.8(g)(1)	Data Reduction	Yes.	
63.8(g)(2)		No	Subpart AA does not require COMS or CEMS
63.8(g)(3) through (5)		Yes.	
63.9(a)	Notification Requirements Applicability	Yes.	
63.9(b)	Initial Notifications	Yes.	
63.9(c)	Request for Compliance Extension	Yes.	
63.9(d)	New Source Notification for Special Compliance Requirements.	Yes.	
63.9(e)	Notification of Performance Test	Yes.	
63.9(f)	Notification of VE/Opacity Test	No	Subpart AA does not include VE/opacity standards.
63.9(g)	Additional CMS Notifications	No	Subpart AA does not require CMS performance evaluation, COMS, or CEMS.
63.9(h)(1) through (3)	Notification of Compliance Status	Yes.	
63.9(h)(4)		No	[Reserved].
63.9(h)(5) and (6)		Yes.	
63.9(i)	Adjustment of Deadlines	Yes.	
63.9(j)	Change in Previous Information	Yes.	
63.10(a)	Recordkeeping/Reporting-Applicability	Yes.	
63.10(b)	General Recordkeeping Requirements	Yes.	
63.10(c)(1)	Additional CMS Recordkeeping	Yes.	
63.10(c)(2) through (4)		No	[Reserved].
63.10(c)(5)		Yes.	
63.10(c)(6)		No	Subpart AA does not require CMS performance specifications.
63.10(c)(7) and (8)		Yes.	
63.10(c)(9)		No	[Reserved].
63.10(c)(10) through (13)		Yes.	
63.10(c)(14)		No	Subpart AA does not require a CMS quality control program.
63.10(c)(15)		Yes.	
63.10(d)(1)	General Reporting Requirements	Yes.	

APPENDIX A TO SUBPART AA OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART AA—Continued

40 CFR citation	Requirement	Applies to subpart AA	Comment
63.10(d)(2) .....	Performance Test Results .....	Yes.	
63.10(d)(3) .....	Opacity or VE Observations .....	No .....	Subpart AA does not include VE/opacity standards.
63.10(d)(4) and (5) .....	Progress Reports/Startup, Shutdown, and Malfunction Reports.	Yes.	
63.10(e)(1) and (2) .....	Additional CMS Reports .....	No .....	Subpart AA does not require CEMS or CMS performance evaluations.
63.10(e)(3) .....	Excess Emissions/CMS Performance Reports ...	Yes. ....	§ 63.606(c)(2) includes additional requirements. A CMS performance report is not required.
63.10(e)(4) .....	COMS Data Reports .....	No .....	Subpart AA does not require COMS.
63.10(f) .....	Recordkeeping/Reporting Waiver .....	Yes.	
63.11(a) .....	Control Device Requirements Applicability .....	Yes.	
63.11(b) .....	Flares .....	No .....	Flares not applicable.
63.12 .....	State Authority and Delegations .....	Yes.	
63.13 .....	Addresses .....	Yes.	
63.14 .....	Incorporation by Reference .....	Yes.	
63.15 .....	Information Availability/Confidentiality .....	Yes.	

4. Part 63 is amended by adding subpart BB consisting of §§ 63.620 through 63.631 to read as follows:

**Subpart BB—National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants**

- Sec.
- 63.620 Applicability
- 63.621 Definitions.
- 63.622 Standards for existing sources.
- 63.623 Standards for new sources.
- 63.624 Operating requirements.
- 63.625 Monitoring requirements.
- 63.626 Performance tests and compliance provisions.
- 63.627 Notification, recordkeeping, and reporting requirements.
- 63.628 Applicability of general provisions.
- 63.629 Miscellaneous requirements.
- 63.630 Compliance dates.
- 63.631 Exemption from new source performance standards.

**Appendix A to Subpart BB of Part 63—Applicability of General Provisions (40 CFR Part 63, Subpart A) to Subpart BB**

**Subpart BB—National Emission Standards for Hazardous Air Pollutants From Phosphate Fertilizers Production Plants**

**§ 63.620 Applicability.**

(a) Except as provided in paragraphs (c) and (d) of this section, the requirements of this subpart apply to the owner or operator of each phosphate fertilizers production plant.

(b) The requirements of this subpart apply to emissions of hazardous air pollutants (HAPs) emitted from the following new or existing affected sources at a phosphate fertilizers production plant:

(1) Each diammonium and/or monoammonium phosphate process line. The requirements of this subpart

apply to the following emission points which are components of a diammonium and/or monoammonium phosphate process line: reactors, granulators, dryers, coolers, screens, and mills.

(2) Each granular triple superphosphate process line. The requirements of this subpart apply to the following emission points which are components of a granular triple superphosphate process line: mixers, curing belts (dens), reactors, granulators, dryers, coolers, screens, and mills.

(3) Each granular triple superphosphate storage building. The requirements of this subpart apply to the following emission points which are components of a granular triple superphosphate storage building: storage or curing buildings, conveyors, elevators, screens and mills.

(c) The requirements of this subpart do not apply to the owner or operator of a new or existing phosphate fertilizers production plant that is not a major source as defined in § 63.2.

(d) The provisions of this subpart do not apply to research and development facilities as defined in § 63.621.

**§ 63.621 Definitions.**

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, or in this section as follows:

*Diammonium and/or monoammonium phosphate process line* means any process line manufacturing granular diammonium and/or monoammonium phosphate by reacting ammonia with phosphoric acid which has been derived from or manufactured by reacting phosphate rock and acid.

*Equivalent P<sub>2</sub>O<sub>5</sub> feed* means the quantity of phosphorus, expressed as phosphorous pentoxide, fed to the process.

*Equivalent P<sub>2</sub>O<sub>5</sub> stored* means the quantity of phosphorus, expressed as phosphorus pentoxide, being cured or stored in the affected facility.

*Exceedance* means a departure from an indicator range established for monitoring under this subpart, consistent with any averaging period specified for averaging the results of the monitoring.

*Fresh granular triple superphosphate* means granular triple superphosphate produced within the preceding 72 hours.

*Granular triple superphosphate process line* means any process line, not including storage buildings, manufacturing granular triple superphosphate by reacting phosphate rock with phosphoric acid.

*Granular triple superphosphate storage building* means any building curing or storing fresh granular triple superphosphate.

*Research and development facility* means research or laboratory operations whose primary purpose is to conduct research and development into new processes and products, where the operations are under the close supervision of technically trained personnel, and where the facility is not engaged in the manufacture of products for commercial sale in commerce or other off-site distribution, except in a de minimis manner.

*Total fluorides* means elemental fluorine and all fluoride compounds, including the HAP hydrogen fluoride, as measured by reference methods

specified in 40 CFR part 60, appendix A, Method 13 A or B, or by equivalent or alternative methods approved by the Administrator pursuant to § 63.7(f).

**§ 63.622 Standards for existing sources.**

(a) *Diammonium and/or monoammonium phosphate process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 30 grams/metric ton of equivalent  $P_2O_5$  feed (0.060 lb/ton).

(b) *Granular triple superphosphate process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 75 grams/metric ton of equivalent  $P_2O_5$  feed (0.150 lb/ton).

(c) *Granular triple superphosphate storage building.*

(1) On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 0.250 grams/hr/metric ton of equivalent  $P_2O_5$  stored ( $5.0 \times 10^{-4}$  lb/hr/ton of equivalent  $P_2O_5$  stored).

(2) No owner or operator subject to the provisions of this subpart shall ship fresh granular triple superphosphate from an affected facility.

**§ 63.623 Standards for new sources.**

(a) *Diammonium and/or monoammonium phosphate process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 29.0 grams/metric ton of equivalent  $P_2O_5$  feed (0.0580 lb/ton).

(b) *Granular triple superphosphate process line.* On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides

in excess of 61.50 grams/metric ton of equivalent  $P_2O_5$  feed (0.1230 lb/ton).

(c) *Granular triple superphosphate storage building*

(1) On and after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, no owner or operator subject to the provisions of this subpart shall cause to be discharged into the atmosphere from any affected source any gases which contain total fluorides in excess of 0.250 grams/hr/metric ton of equivalent  $P_2O_5$  stored ( $5.0 \times 10^{-4}$  lb/hr/ton of equivalent  $P_2O_5$  stored).

(2) No owner or operator subject to the provisions of this subpart shall ship fresh granular triple superphosphate from an affected facility.

**§ 63.624 Operating requirements.**

On or after the date on which the performance test required to be conducted by §§ 63.7 and 63.626 is required to be completed, the owner/operator using a wet scrubbing emission control system must maintain three-hour averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber within the allowable ranges established pursuant to the requirements of § 63.625(f)(1) or (2).

**§ 63.625 Monitoring requirements.**

(a) Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of this subpart shall install, calibrate, maintain, and operate a monitoring system which can be used to determine and permanently record the mass flow of phosphorus-bearing feed material to the process. The monitoring system shall have an accuracy of  $\pm 5$  percent over its operating range.

(b) Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line subject to the provisions of this subpart shall maintain a daily record of equivalent  $P_2O_5$  feed by first determining the total mass rate in metric ton/hour of phosphorus bearing feed using a monitoring system for measuring mass flowrate which meets the requirements of paragraph (a) of this section and then by proceeding according to § 63.626(c)(3).

(c) Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building using a wet scrubbing emission control system

shall install, calibrate, maintain, and operate the following monitoring systems:

(1) A monitoring system which continuously measures and permanently records the pressure drop across each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

(2) A monitoring system which continuously measures and permanently records the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system in 15-minute block averages. The monitoring system shall be certified by the manufacturer to have an accuracy of  $\pm 5$  percent over its operating range.

(d) The owner or operator of any granular triple superphosphate storage building subject to the provisions of this subpart shall maintain an accurate account of granular triple superphosphate in storage to permit the determination of the amount of equivalent  $P_2O_5$  stored.

(e)(1) Each owner or operator of a new or existing granular triple superphosphate storage building subject to the provisions of this subpart shall maintain a daily record of total equivalent  $P_2O_5$  stored by multiplying the percentage  $P_2O_5$  content, as determined by § 63.626(d)(3), times the total mass of granular triple superphosphate stored.

(2) The owner or operator of any granular triple superphosphate storage building subject to the provisions of this subpart shall develop for approval by the Administrator a site-specific methodology including sufficient recordkeeping for the purposes of demonstrating compliance with § 63.622(c)(2) or § 63.623(c)(2), as applicable.

(f) Following the date on which the performance test required in § 63.626 is completed, the owner or operator of a new or existing affected source using a wet scrubbing emission control system and subject to emissions limitations for total fluorides or particulate matter contained in this subpart must establish allowable ranges for operating parameters using the methodology of either paragraph (f)(1) or (2) of this section:

(1) The allowable range for the daily averages of the pressure drop across each scrubber and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system is  $\pm 20$  percent of the baseline average value determined as a requirement of § 63.626(c)(4) or (d)(4). The

Administrator retains the right to reduce the  $\pm 20$  percent adjustment to the baseline average values of operating ranges in those instances where performance test results indicate that a source's level of emissions is near the value of an applicable emissions standard, but, in no instance shall the adjustment be reduced to less than  $\pm 10$  percent. The owner or operator must notify the Administrator of the baseline average value and must notify the Administrator each time that the baseline value is changed as a result of the most recent performance test. The baseline average values used for compliance shall be based on the values determined during the most recent performance test. The new baseline average value shall be effective on the date following the performance test.

(2) The owner or operator of any new or existing affected source shall establish, and provide to the Administrator for approval, allowable ranges of baseline average values for the pressure drop across and of the flow rate of the scrubbing liquid to each scrubber in the process scrubbing system for the purpose of assuring compliance with this subpart. Allowable ranges may be based upon baseline average values recorded during previous performance tests using the test methods required in this subpart and established in the manner required in § 63.626(c)(4) or (d)(4). As an alternative, the owner or operator can establish the allowable ranges of baseline average values using the results of performance tests conducted specifically for the purposes of this paragraph using the test methods required in this subpart and established in the manner required in § 63.626(c)(4) or (d)(4). The source shall certify that the control devices and processes have not been modified subsequent to the testing upon which the data used to establish the allowable ranges were obtained. The allowable ranges of baseline average values developed pursuant to the provisions of this paragraph must be submitted to the Administrator for approval. The owner or operator must request and obtain approval of the Administrator for changes to the allowable ranges of baseline average values. When a source using the methodology of this paragraph is retested, the owner operator shall determine new allowable ranges of baseline average values unless the retest indicates no change in the operating parameters from previous tests. Any new allowable ranges of baseline average values resulting from the most recent performance test shall be effective on the date following the

retest. Until changes to allowable ranges of baseline average values are approved by the Administrator, the allowable ranges for use in § 63.624 shall be based upon the range of baseline average values proposed for approval.

**§ 63.626 Performance tests and compliance provisions.**

(a)(1) On or before the applicable compliance date in § 63.630 and once per annum thereafter, each owner or operator of a phosphate fertilizers production plant subject to the provisions of this subpart shall conduct a performance test to demonstrate compliance with the applicable emission standard for each existing diammonium and/or monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building. The owner or operator shall conduct the performance test according to the procedures in subpart A of this part and in this section.

(2) As required by § 63.7(a)(2) and once per annum thereafter, each owner or operator of a phosphate fertilizers production plant subject to the provisions of this subpart shall conduct a performance test to demonstrate compliance with the applicable emission standard for each new diammonium and/or monoammonium phosphate process line, granular triple superphosphate process line, or granular triple superphosphate storage building. The owner or operator shall conduct the performance test according to the procedures in subpart A of this part and in this section.

(b) In conducting performance tests, each owner or operator of an affected source shall use as reference methods and procedures the test methods in 40 CFR part 60, appendix A, or other methods and procedures as specified in this section, except as provided in § 63.7(f).

(c) Each owner or operator of a new or existing diammonium and/or monoammonium phosphate process line or granular triple superphosphate process line shall determine compliance with the applicable total fluorides standards in § 63.622 or § 63.623 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 (lb/ton) of equivalent  $P_2O_5$  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  $P_2O_5$  feed rate, metric ton/hr (ton/hr).

K = conversion factor, 1000 mg/g (453,600 mg/lb).

(2) Method 13A or 13B (40 CFR part 60, appendix A) 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. If Method 13 B is used, the fusion of the filtered material described in section 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in sections 7.3.3 and 7.3.4 in Method 13 A, may be omitted. The sampling time and sample volume for each run shall be at least one hour and 0.85 dscm (30 dscf).

(3) The equivalent  $P_2O_5$  feed rate (P) shall be computed using the following equation:

$$P = M_p R_p$$

Where:

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

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

(i) The accountability system described in § 63.625(a) and (b) shall be used to determine the mass flow rate ( $M_p$ ) of the phosphorus-bearing feed.

(ii) The  $P_2O_5$  content ( $R_p$ ) of the feed shall be determined using as appropriate the following methods (incorporated by reference—see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:

(A) Section IX, Methods of Analysis for Phosphate Rock, No. 1 Preparation of Sample.

(B) Section IX, Methods of Analysis for Phosphate Rock, No. 3 Phosphorus— $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method A—Volumetric Method.

(C) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus— $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method B—Gravimetric Quimociac Method.

(D) Section IX, Methods of Analysis For Phosphate Rock, No. 3 Phosphorus— $P_2O_5$  or  $Ca_3(PO_4)_2$ , Method C—Spectrophotometric Method.

(E) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus— $P_2O_5$ , Method A—Volumetric Method.

(F) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate,

Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method B—Gravimetric Quimociac Method.

(G) Section XI, Methods of Analysis for Phosphoric Acid, Superphosphate, Triple Superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus-P<sub>2</sub>O<sub>5</sub>, Method C—Spectrophotometric Method.

(4) To comply with § 63.625(f)(1) or (2), the owner or operator shall use the monitoring systems in § 63.625(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of § 63.625(f)(1) or (2).

(d) Each owner or operator of a new or existing granular triple superphosphate storage building shall determine compliance with the applicable total fluorides standards in § 63.622 or § 63.623 as follows:

(1) The owner or operator shall conduct performance tests only when the following quantities of product are being cured or stored in the facility.

(i) Total granular triple superphosphate is at least 10 percent of the building capacity, and

(ii) Fresh granular triple superphosphate is at least six percent of the total amount of granular triple superphosphate, or

(iii) If the provision in paragraph (d)(1)(ii) of this section exceeds production capabilities for fresh granular triple superphosphate, fresh granular triple superphosphate is equal to at least 5 days maximum production.

(2) In conducting the performance test, the owner or operator shall use as reference methods and procedures the test methods in 40 CFR part 60, appendix A, or other methods and procedures as specified in this section, except as provided in § 63.7(f).

(3) The owner or operator shall determine compliance with the total fluorides standard in §§ 63.622 and 63.623 as follows:

(i) 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/hr/metric ton (lb/hr/ton) of equivalent P<sub>2</sub>O<sub>5</sub> stored.

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

Q<sub>sdi</sub> = volumetric flow rate of effluent gas from emission point "i," dscm/hr (dscf/hr).

N = number of emission points in the affected facility.

P = equivalent P<sub>2</sub>O<sub>5</sub> stored, metric tons (tons).

K = conversion factor, 1000 mg/g (453,600 mg/lb).

(ii) Method 13A or 13B (40 CFR part 60, appendix A) 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. If Method 13B is used, the fusion of the filtered material described in section 7.3.1.2 and the distillation of suitable aliquots of containers 1 and 2, described in Sections 7.3.3 and 7.3.4 in Method 13 A, may be omitted. The sampling time and sample volume for each run shall be at least one hour and 0.85 dscm (30 dscf).

(iii) The equivalent P<sub>2</sub>O<sub>5</sub> feed rate (P) shall be computed using the following equation:

$$P = M_p R_p$$

Where:

M<sub>p</sub> = amount of product in storage, metric ton (ton).

R<sub>p</sub> = P<sub>2</sub>O<sub>5</sub> content of product in storage, weight fraction.

(iv) The accountability system described in § 63.625(d) and (e) shall be used to determine the amount of product (M<sub>p</sub>) in storage.

(v) The P<sub>2</sub>O<sub>5</sub> content (R<sub>p</sub>) of the product stored shall be determined using as appropriate the following methods (incorporated by reference—see 40 CFR 63.14) specified in the Book of Methods Used and Adopted By The Association Of Florida Phosphate Chemists, Seventh Edition 1991, where applicable:

(A) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus—P<sub>2</sub>O<sub>5</sub>, Method A—Volumetric Method.

(B) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus—P<sub>2</sub>O<sub>5</sub>, Method B—Gravimetric Quimociac Method.

(C) Section XI, Methods of Analysis For Phosphoric Acid, Superphosphate, Triple superphosphate, and Ammonium Phosphates, No. 3 Total Phosphorus—P<sub>2</sub>O<sub>5</sub>, Method C—Spectrophotometric Method, or,

(vi) The P<sub>2</sub>O<sub>5</sub> content (R<sub>p</sub>) of the product stored shall be determined using as appropriate the following

methods (incorporated by reference—see 40 CFR 63.14) specified in the Official Methods of Analysis of AOAC International, sixteenth Edition, 1995, where applicable:

(A) AOAC Official Method 957.02 Phosphorus (Total) In Fertilizers, Preparation of Sample Solution.

(B) AOAC Official Method 929.01 Sampling of Solid Fertilizers.

(C) AOAC Official Method 929.02 Preparation of Fertilizer Sample.

(D) AOAC Official Method 978.01 Phosphorus (Total) in Fertilizers, Automated Method.

(E) AOAC Official Method 969.02 Phosphorus (Total) in Fertilizers, Alkalimetric Quinolinium Molybdophosphate Method.

(F) AOAC Official Method 962.02 Phosphorus (Total) in Fertilizers, Gravimetric Quinolinium Molybdophosphate Method.

(G) AOAC Official Method 958.01 Phosphorus (Total) in Fertilizers, Spectrophotometric Molybdovanadophosphate Method.

(4) To comply with § 63.625(f) (1) or (2), the owner or operator shall use the monitoring systems described in § 63.625(c) to determine the average pressure loss of the gas stream across each scrubber in the process scrubbing system and to determine the average flow rate of the scrubber liquid to each scrubber in the process scrubbing system during each of the total fluoride runs. The arithmetic averages of the three runs shall be used as the baseline average values for the purposes of § 63.625(f) (1) or (2).

#### § 63.627 Notification, recordkeeping, and reporting requirements.

(a) Each owner or operator subject to the requirements of this subpart shall comply with the notification requirements in § 63.9.

(b) Each owner or operator subject to the requirements of this subpart shall comply with the recordkeeping requirements in § 63.10.

(c) The owner or operator of an affected source shall comply with the reporting requirements specified in § 63.10 as follows:

(1) *Performance test report.* As required by § 63.10, the owner or operator shall report the results of the initial and annual performance tests as part of the notification of compliance status required in § 63.9.

(2) *Excess emissions report.* As required by § 63.10, the owner or operator of an affected source shall submit an excess emissions report for any exceedance of an operating parameter limit. The report shall contain the information specified in

§ 63.10. When no exceedances of an operating parameter have occurred, such information shall be included in the report. The report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half. If exceedances are reported, the owner or operator shall report quarterly until a request to reduce reporting frequency is approved as described in § 63.10.

(3) *Summary report.* If the total duration of control system exceedances for the reporting period is less than 1 percent of the total operating time for the reporting period, the owner or operator shall submit a summary report containing the information specified in § 63.10 rather than the full excess emissions report, unless required by the Administrator. The summary report shall be submitted semiannually and shall be delivered or postmarked by the 30th day following the end of the calendar half.

(4) If the total duration of control system operating parameter exceedances for the reporting period is 1 percent or greater of the total operating time for the reporting period, the owner or operator shall submit a summary report and the excess emissions report.

**§ 63.628 Applicability of general provisions.**

The requirements of the general provisions in subpart A of this part that are applicable to the owner or operator subject to the requirements of this subpart are shown in appendix A to this subpart.

**§ 63.629 Miscellaneous requirements.**

The Administrator retains the authority to approve site-specific test plans for uncontrolled granular triple superphosphate storage buildings developed pursuant to § 63.7(c)(2)(i).

**§ 63.630 Compliance dates.**

(a) Each owner or operator of an existing affected source at a phosphate fertilizers production plant shall achieve compliance with the requirements of this subpart no later than June 10, 2002. Notwithstanding the requirements of § 63.7(a)(2)(iii), each owner or operator of an existing affected source at a phosphate fertilizers production plant shall fulfill the applicable requirements of § 63.626 no later than June 10, 2002.

(b) Each owner or operator of a phosphate fertilizers production plant that commences construction or reconstruction of an affected source

after December 27, 1996 shall achieve compliance with the requirements of this subpart upon startup of operations or by June 10, 1999, whichever is later.

(c) The owner or operator of any existing uncontrolled granular triple superphosphate storage building subject to the provisions of this subpart shall submit for approval by the Administrator a site-specific test plan for each such building according to the provisions of § 63.7(b)(2)(i) no later than June 12, 2000.

**§ 63.631 Exemption from new source performance standards.**

Any affected source subject to the provisions of this subpart is exempted from any otherwise applicable new source performance standard contained in 40 CFR part 60, subpart V, subpart W, or subpart X. To be exempt, a source must have a current operating permit pursuant to Title V of the Act and the source must be in compliance with all requirements of this subpart. For each affected source, this exemption is effective upon the date that the owner or operator demonstrates to the Administrator that the requirements of §§ 63.624, 63.625 and 63.626 have been met.

APPENDIX A TO SUBPART BB OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART BB

40 CFR citation	Requirement	Applies to subpart BB	Comment
63.1(a)(1) through (4)	General Applicability	Yes.	
63.1(a)(5)		No	[Reserved].
63.1(a)(6) through (8)		Yes.	
63.1(a)(9)		No	[Reserved].
63.1(a)(10) through (14)		Yes.	
63.1(b)	Initial Applicability Determination	Yes.	
63.1(c)(1)	Applicability After Standard Established	Yes.	
63.1(c)(2)		Yes	Some plants may be area sources.
63.1(c)(3)		No	[Reserved].
63.1(c)(4) and (5)		Yes.	
63.1(d)		No	[Reserved].
63.1(e)	Applicability of Permit Program	Yes.	
63.2	Definitions	Yes	Additional definitions in § 63.621.
63.3	Units and Abbreviations	Yes.	
63.4(a)(1) through (3)	Prohibited Activities	Yes.	
63.4(a)(4)		No	[Reserved].
63.4(a)(5)		Yes.	
63.4(b) and (c)	Circumvention/Severability	Yes.	
63.5(a)	Construction/Reconstruction Applicability	Yes.	
63.5(b)(1)	Existing, New, Reconstructed Sources Requirements.	Yes.	
63.5(b)(2)		No	[Reserved].
63.5(b)(3) through (6)		Yes.	
63.5(c)		No	[Reserved].
63.5(d)	Application for Approval of Construction/Reconstruction.	Yes.	
63.5(e)	Approval of Construction/Reconstruction	Yes.	
63.5(f)	Approval of Construction/Reconstruction Based on State Review.	Yes.	
63.6(a)	Compliance with Standards and Maintenance Applicability.	Yes.	
63.6(b)(1) through (5)	New and Reconstructed Sources Dates	Yes	See also § 63.629.
63.6(b)(6)		No	[Reserved].

## APPENDIX A TO SUBPART BB OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART BB—Continued

40 CFR citation	Requirement	Applies to subpart BB	Comment
63.6(b)(7) .....	.....	Yes.	
63.6(c)(1) .....	Existing Sources Dates .....	Yes .....	§ 63.629 specifies dates.
63.6(c)(2) .....	.....	Yes.	
63.6(c)(3) and (4) .....	.....	No .....	[Reserved].
63.6(c)(5) .....	.....	Yes.	
63.6(d) .....	.....	No .....	[Reserved].
63.6(e)(1) and (2) .....	Operation & Maintenance Requirements .....	Yes .....	§ 63.624 specifies additional requirements.
63.6(e)(3) .....	Startup, Shutdown, and Malfunction Plan .....	Yes .....	§ 63.624 specifies additional requirements.
63.6(f) .....	Compliance with Emission Standards .....	Yes .....	§§ 63.622 through 625 specify additional requirements.
63.6(g) .....	Alternative Standard .....	Yes.	
63.6(h) .....	Compliance with Opacity/VE Standards .....	No .....	Subpart BB does not include VE/opacity standards.
63.6(i)(1) through (14) .....	Extension of Compliance .....	Yes.	
63.6(i)(15) .....	.....	No .....	[Reserved].
63.6(i)(16) .....	.....	Yes.	
63.6(j) .....	Exemption from Compliance .....	Yes.	
63.7(a) .....	Performance Test Requirements Applicability .....	Yes .....	§ 63.629(a) applies rather than § 63.7(a)(2)(iii).
63.7(b) .....	Notification .....	Yes.	
63.7(c) .....	Quality Assurance/Test Plan .....	Yes.	
63.7(d) .....	Testing Facilities .....	Yes.	
63.7(e) .....	Conduct of Tests .....	Yes .....	§§ 63.624 and 63.625 specify additional requirements.
63.7(f) .....	Alternative Test Method .....	Yes.	
63.7(g) .....	Data Analysis .....	Yes.	
63.7(h) .....	Waiver of Tests .....	Yes.	
63.8(a)(1) .....	Monitoring Requirements Applicability .....	Yes.	
63.8(a)(2) .....	.....	No .....	Subpart BB does not require CMS performance specifications.
63.8(a)(3) .....	.....	No .....	[Reserved].
63.8(a)(4) .....	.....	Yes.	
63.8(b) .....	Conduct of Monitoring .....	Yes.	
63.8(c)(1) through (4) .....	CMS Operation/Maintenance .....	Yes.	
63.8(c)(5) through (8) .....	.....	No .....	Subpart BB does not require COMS/CEMS or CMS performance specifications.
63.8(d) .....	Quality Control .....	Yes.	
63.8(e) .....	CMS Performance Evaluation .....	No .....	Subpart BB does not require CMS performance evaluations.
63.8(f)(1) through (5) .....	Alternative Monitoring Method .....	Yes.	
63.8(f)(6) .....	Alternative to RATA Test .....	No .....	Subpart BB does not require CEMS.
63.8(g)(1) .....	Data Reduction .....	Yes.	
63.8(g)(2) .....	.....	No .....	Subpart BB does not require COMS or CEMS.
63.8(g)(3) through (5) .....	.....	Yes.	
63.9(a) .....	Notification Requirements Applicability .....	Yes.	
63.9(b) .....	Initial Notifications .....	Yes.	
63.9(c) .....	Request for Compliance Extension .....	Yes.	
63.9(d) .....	New Source Notification for Special Compliance Requirements .....	Yes.	
63.9(e) .....	Notification of Performance Test .....	Yes.	
63.9(f) .....	Notification of VE/Opacity Test .....	No .....	Subpart BB does not include VE/opacity standards.
63.9(g) .....	Additional CMS Notifications .....	No .....	Subpart BB does not require CMS performance evaluation, COMS, or CEMS.
63.9(h)(1) through (3) .....	Notification of Compliance Status .....	Yes.	
63.9(h)(4) .....	.....	No .....	[Reserved].
63.9(h)(5) and (6) .....	.....	Yes.	
63.9(i) .....	Adjustment of Deadlines .....	Yes.	
63.9(j) .....	Change in Previous Information .....	Yes.	
63.10(a) .....	Recordkeeping/Reporting-Applicability .....	Yes.	
63.10(b) .....	General Recordkeeping Requirements .....	Yes.	
63.10(c)(1) .....	Additional CMS Recordkeeping .....	Yes.	
63.10(c)(2) through (4) .....	.....	No .....	[Reserved].
63.10(c)(5) .....	.....	Yes.	

APPENDIX A TO SUBPART BB OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS (40 CFR PART 63, SUBPART A) TO SUBPART BB—Continued

40 CFR citation	Requirement	Applies to subpart BB	Comment
63.10(c)(6) .....	.....	No .....	Subpart BB does not require CMS performance specifications.
63.10(c)(7) and (8) .....	.....	Yes.	
63.10(c)(9) .....	.....	No .....	[Reserved].
63.10(c)(10 ) through (13) .....	.....	Yes.	
63.10(c)(14) .....	.....	No .....	Subpart BB does not require a CMS quality control program.
63.10(c)(15) .....	.....	Yes.	
63.10(d)(1) .....	General Reporting Requirements .....	Yes.	
63.10(d)(2) .....	Performance Test Results .....	Yes.	
63.10(d)(3) .....	Opacity or VE Observations .....	No .....	Subpart BB does not include VE/opacity standards.
63.10(d)(4) and (5) .....	Progress Reports/Startup, Shutdown, and Malfunction Reports.	Yes.	
63.10(e)(1) and (2) .....	Additional CMS Reports .....	No .....	Subpart BB does not require CEMS or CMS performance evaluations.
63.10(e)(3) .....	Excess Emissions/CMS Performance Reports ...	Yes .....	§ 63.626(c)(2) includes additional requirements. A CMS performance report is not required.
63.10(e)(4) .....	COMS Data Reports .....	No .....	Subpart BB does not require COMS.
63.10(f) .....	Recordkeeping/Reporting Waiver .....	Yes.	
63.11(a) .....	Control Device Requirements Applicability .....	Yes.	
63.11(b) .....	Flares .....	No .....	Flares not applicable.
63.12 .....	State Authority and Delegations .....	Yes .....	Authority for approval of site-specific test plans for GTSP storage buildings is retained (see § 63.628(a)).
63.13 .....	Addresses .....	Yes.	
63.14 .....	Incorporation by Reference .....	Yes.	
63.15 .....	Information Availability/Confidentiality .....	Yes.	

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