ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[Docket 24-7004; FRL-6231-1]

Federal Rulemaking For the FMC Facility in the Fort Hall PM-10 Nonattainment Area

AGENCY: Environmental Protection Agency.

ACTION: Notice of proposed rulemaking.

SUMMARY: The Environmental Protection Agency (EPA) proposes to promulgate a Federal Implementation Plan (FIP) containing emission limits and work practice requirements that represent reasonably available control technology, along with related monitoring, recordkeeping, and reporting requirements, for particulate matter air pollution emitted from an elemental phosphorous facility owned and operated by FMC Corporation and located within the exterior boundaries of the Fort Hall Indian Reservation in southeastern Idaho (FMC or FMC facility). A portion of the Fort Hall Indian Reservation, known as the “Fort Hall PM-10 nonattainment area,” has been designated as a nonattainment area for the National Ambient Air Quality Standards (NAAQS) for particulate matter with an aerodynamic diameter less than or equal to a nominal ten micrometers (PM-10), which pre-date the new PM NAAQS that were promulgated in 1997. The FMC facility is the only major stationary source of PM-10 located in the Fort Hall PM-10 nonattainment area.

Although there are other area sources and minor stationary sources of PM-10 in the Fort Hall PM-10 nonattainment area, EPA believes that these other sources have an insignificant impact on the violations of the pre-existing 24-hour PM-10 standard that have been recorded by the monitors located in the nonattainment area. EPA believes that the control strategy for FMC proposed by EPA in this rulemaking is necessary to ensure maintenance of air quality that protects public health during the transition period leading to implementation of the newly-promulgated PM standards and assist in bringing the Fort Hall PM-10 nonattainment area into attainment with the recently-promulgated PM NAAQS as expeditiously as practicable. If EPA later determines that sources other than FMC contribute to PM violations in the area, the Shoshone-Bannock Tribes or EPA will develop and impose appropriate controls on these other sources in the Fort Hall PM-10 nonattainment area.

EPA's 1997 PM NAAQS rulemaking established new standards for particulate matter with a diameter equal to or less than 2.5 microns and also revised the existing PM-10 standards. Today's proposal, however, does not directly address these new and revised standards. Rather, it addresses requirements under the pre-existing PM-10 standards, which are still in effect for a limited time, and the provisions of section 172(e) to which the Fort Hall PM-10 nonattainment area is subject during the

transition toward implementation of the new and revised PM standards.

DATES: Written comments will be accepted until **May 12, 1999.**

EPA will hold a public hearing at the following time:
FMC FIP Public Hearing, Thursday, March 18, 1999, 6:00 p.m. to 9:00 p.m.

ADDRESSES: Comments should be submitted (in duplicate if possible) to: Montel Livingston, SIP Manager, Environmental Protection Agency, Office of Air quality (OAQ-107), 1200 Sixth Avenue, Seattle Washington 98101.

EPA will hold a public hearing at the following location:
FMC FIP Public Hearing, Fort Hall Business Council Chambers, Agency and Bannock Roads, Fort Hall, Idaho 83202.

EPA also plans to hold a public workshop prior to the public hearing. The time, date, and location of the public workshop will be announced in local papers.

DOCKET: A copy of docket no.ID 24-7004, containing material

relevant to EPA’s proposed action, is available for public inspection and copying from 8:00 a.m. to 5:30 p.m. Eastern Standard Time, Monday through Friday, at EPA's Central Docket Section, Office of Air and Radiation, Room 1500 (M-6102), 401 M Street, SW., Washington, D.C. 20460, and between 8:30 a.m. and 3:30 p.m. Pacific Standard Time, at EPA Region 10, Office of Air Quality, 10th Floor, 1200 Sixth Avenue, Seattle, Washington 98101. A copy of the docket is also available for review at the Shoshone-Bannock Tribes, Office of Air Quality Program, Land Use Commission, Fort Hall Government Center, Agency and Bannock Roads, Fort Hall, Idaho 83202. A reasonable fee may be charged for copies.

FOR FURTHER INFORMATION CONTACT: Steven K. Body, 206-553-0782, Office of Air Quality (OAQ-107), Environmental Protection Agency, 1200 Sixth Avenue, Seattle, Washington 98101.

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A. Background

The Fort Hall PM-10 nonattainment area is located in southeastern Idaho and consists of both trust and fee lands within the exterior boundaries of the Fort Hall Indian Reservation (Reservation). Until recently, it was part of the Power-Bannock Counties PM-10 nonattainment area, which also included State lands in Power and Bannock Counties, including the

cities of Pocatello and Chubbuck.[1]

PM-10 monitors established on the Reservation in 1996 have recorded numerous exceedences of the pre-existing 24-hour PM-10 standard and document a violation of the pre-existing 24-hour PM-10 standard as of December 31, 1996, and continuing in subsequent years. The monitors also strongly suggest that the area is in violation of the pre-existing annual PM-10 NAAQS. Although EPA revised both the 24-hour and annual PM-10 standards on July 18, 1997 (62 FR 38651), the pre-existing PM-10 standards remain in effect in the Fort Hall PM-10 nonattainment area.[2] In addition, EPA believes there is a strong likelihood that the Fort Hall PM-10 nonattainment area is in violation of the revised 24-hour and annual PM-10 standards.

Consequently, the residents of the Fort Hall Indian

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[1]As discussed in more detail below, the State land within the former Power-Bannock Counties PM-10 nonattainment area is now known as "the Portneuf Valley PM-10 nonattainment area."

[2]There are two pre-existing PM-10 NAAQS, a 24-hour standard and an annual standard. See 40 CFR 50.6 (1996). EPA promulgated these NAAQS on July 1, 1987 (52 FR 24672), replacing standards for total suspended particulate with new standards applying only to particulate matter up to ten microns in diameter (PM-10). The annual PM-10 standard is attained when the expected annual arithmetic average of the 24-hour samples for a period of one year does not exceed 50 micrograms per cubic meter (ug/m3). Attainment of the 24-hour PM-10 standard is determined by calculating the expected number of days in a year with PM-10 concentrations greater than 150 ug/m3. The 24-hour PM-10 standard is attained when the expected number of days with levels above the standard, averaged over a three-year period, is less than or equal to one. See 40 CFR 50.6 and 40 CFR part 50, appendix K. When EPA promulgated revised NAAQS for PM-2.5 and PM-10 in 1997, it provided that the pre-existing standards for PM-10 would remain in effect until certain prescribed events occur. See 40 CFR 50.6(d)(1998).

Reservation continue to breathe unhealthy air. Particulate matter affects the respiratory system and can cause damage to lung tissue and premature death. The elderly, children, and people with chronic lung disease, influenza, and asthma are especially sensitive to high levels of particulate matter. As EPA concluded in promulgating the new and revised particulate matter NAAQS, the serious health effects associated with exposure to coarse particulate matter justified retaining PM-10 standards, in addition to fine particle, or PM-2.5, standards. See 62 FR 38651, 38677-679 (July 18, 1997). The highest PM-10 level reported from the monitors in the Fort Hall PM-10 nonattainment area is 433 ug/m3, a level almost three times the level of the pre-existing and revised 24-hour PM-10 NAAQS.

Based on available information, EPA believes that the primary, if not the sole, cause of the PM-10 problem in the Fort Hall PM-10 nonattainment area is primary PM-10 emissions from an elemental phosphorous facility owned and operated by FMC Corporation (FMC or FMC facility), which is located on fee lands within the Reservation and the nonattainment area.[3] The FMC facility emits more than 700 tons of PM-10 each year. Without substantial reductions in PM-10 emissions from FMC, the monitors located on the Reservation will continue to show violations of

[3]A portion of the FMC facility is located on State lands. This issue is discussed in more detail below.

the pre-existing 24-hour PM-10 NAAQS and, in all likelihood, the revised 24-hour and annual PM-10 NAAQS, and the residents of the Fort Hall Indian Reservation will continue to breathe unhealthy air.

The Shoshone-Bannock Tribes have been developing a program for regulating sources of air pollution within the Fort Hall Indian Reservation since the early 1990s. Until February 1998, however, Indian tribes did not have authority under the Clean Air Act (CAA or Act) to regulate sources of air emissions and to carry out the requirements of the Act. Therefore, EPA, in close consultation with the Shoshone-Bannock Tribes, began in the early 1990s to develop a strategy for bringing what is now known as the Fort Hall PM-10 nonattainment area into attainment with the pre-existing PM-10 standards. Based on information indicating that the PM-10 violations on the Reservation were caused by PM-10 emissions from FMC, EPA and the Tribes focused their efforts on developing controls for FMC.

Although EPA has now passed regulations that allow the Shoshone-Bannock Tribes to request authorization from EPA to carry out Clean Air Act requirements within the Fort Hall Indian Reservation, including PM-10 planning requirements, the Tribes have advised EPA that they continue to support its efforts to develop and promulgate PM-10 control requirements for FMC because of the substantial resources EPA has already expended on this

effort and because of the technical complexities of controlling PM-10 emissions from FMC. The Tribes have advised EPA that they will continue to develop and request EPA approval of a general air pollution program for sources within the Reservation, including any additional PM-10 controls for other PM-10 area sources and minor stationary sources that may be necessary to meet the anti-backsliding requirements of section 172(e) of the Act during the period of transition to implementation of the revised PM NAAQS and ultimately to attain the revised PM standards.

B. Revised Particulate Matter Standards

As mentioned earlier, on July 18, 1997, EPA promulgated revisions to both the annual and the 24-hour PM-10 standards and also established two new standards for particulate matter, both of which apply only to particulate matter equal to or less than 2.5 microns in diameter (PM-2.5). See 62 FR 38651. These standards became effective on September 16, 1997. Although the overall suite of promulgated particulate matter (PM) standards reflects an overall strengthening of the regulatory standards for particulate matter, the revised PM-10 standards, by themselves, effectively constitute a relaxation of the pre-existing PM-10 standards. As a consequence, areas that had not attained the pre-existing PM-10 standards at the time of the relaxation of the PM-10 NAAQS, such as the Fort Hall PM-10 nonattainment area, have

become subject to CAA section 172(e). That section calls for promulgation by EPA of a rule that requires application of controls that are no less stringent than the controls that would have been required for areas that were designated nonattainment prior to the relaxation. In the preamble to the final rule establishing the new and revised PM standards, EPA stated that inherent in the promulgation of the revised set of PM standards and associated provisions is the revocation of the pre-existing PM-10 standards and associated provisions. However, the Agency decided that the pre-existing PM-10 standards would remain in effect (i.e., revocation would be deferred) for a period of time after the effective date of the new standards to ensure maintenance of public health protection during the transition to the new standards. 62 FR at 38701. For areas that are subject to section 172(e), like the Fort Hall PM-10 nonattainment area, EPA provided that the pre-existing PM-10 standards would continue to apply until the Agency completed the rulemaking to establish the interim controls required under that section. EPA expects to propose a rule meeting the requirements of section 172(e) in early 1999. It should be understood that once EPA issues a final rule pursuant to section 172(e), the requirements of that rule--and not the pre-existing PM-10 standards which will be revoked at that time--will govern all areas subject to section 172(e), including the Fort Hall PM-10 nonattainment area. The section

172(e) rulemaking will also govern today's action because it proposes requirements intended to apply to areas like the Fort Hall PM-10 nonattainment area that had not attained the standard at the time of the relaxation. Therefore, although today's FIP proposal addresses the clear statutory requirement of section 172(e)(namely, that for subject areas controls be applied and implemented that are no less stringent than were applicable in areas designated nonattainment prior to the NAAQS relaxation), statements made in today's proposal that relate to other CAA requirements concerning the pre-existing 24-hour and annual PM-10 standards will be subject to interpretations established by EPA when it takes final action on the forthcoming section 172(e) rulemaking, which may in some cases require modifications to such statements.

References in today's FIP proposal to attainment requirements or attainment demonstrations applicable for the pre-existing PM-10 standards are being utilized by EPA primarily as a yardstick for determining the emissions reduction levels that are appropriate to achieve during this regulatory transition period in order to avoid backsliding as contemplated by section 172(e). Accordingly, EPA believes that the control requirements set forth in this proposed FIP for the FMC facility will be consistent with the requirements of the forthcoming section 172(e) rule, when that rule is promulgated and the pre-existing PM-10 standards are

revoked. This FIP proposal requires application of controls that represent reasonably available control technology (RACT). This is consistent with the plain terms of section 172(e), because this is the same level of controls that would have been required prior to the relaxation of the PM-10 standards in states with moderate PM-10 nonattainment areas.

In the preamble to the rule that established the revised PM standards, EPA also indicated that, as part of its implementation policy during the period of transition from the pre-existing to the revised PM standards, it would not require current PM-10 nonattainment areas to undertake attainment demonstrations for the pre-existing PM-10 standards. Instead, the Agency said it would concentrate on getting approved into the SIPs for such areas the controls needed to ensure that healthy PM levels would be maintained during the transition period. See 62 FR at 38701. As noted above, however, EPA believes it remains appropriate to use emissions reduction targets that are commensurate with attainment levels for the pre-existing PM-10 standards in order to determine the adequacy of the adopted controls to protect the public's health. This is necessary for several reasons. First, it will take some time for states and EPA to identify the PM problems under the new and revised standards, to designate areas appropriately, and to develop effective means to address the PM problems. Also, as a threshold matter, states will need to

accumulate the three years of ambient air quality data on which EPA regulations base most significant PM NAAQS. Another important reason is that the control requirements for a moderate PM-10 nonattainment area (i.e., reasonably available control measures (RACM) and RACT) are traditionally determined by considering the attainment needs of the area. A state with such an area would typically prepare an attainment demonstration to determine the level by which emissions need to be reduced to meet the standards. It would then select a mix of reasonably available measures, consistent with EPA guidance, calculated to achieve that emissions reduction level. As applied to the Fort Hall PM-10 nonattainment area–an area for which no comprehensive PM implementation plan and control strategy has really ever been applied--and as applied to FMC in particular, the discussions throughout this FIP proposal regarding the relationship of the emissions reductions expected to be achieved through implementation of the proposed RACT-level controls to attainment of the pre-existing PM-10 standards are not included for purposes of demonstrating attainment of those standards. Rather, the discussion of the pre-existing PM-10 NAAQS serves the benchmark purpose described above of determining the appropriate RACT-level measures needed to be implemented in that area, both to maintain public health protection during the transition period as well as to assist in ultimately attaining the revised PM-10 standards. In

summary, then, the fact that 1) these new and revised PM standards have now been promulgated, 2) there is a need for states and EPA to begin to transition from implementation under the pre-existing PM-10 standards towards implementation under the revised PM-10 standards, and 3) regulatory requirements for this area during the transition period will be governed by the statutory provisions of section 172(e), as interpreted by EPA, all have a direct bearing on the substance and content of the FIP that is being proposed today for the Fort Hall PM-10 nonattainment area.

C. FIP Proposal

In this proposal, EPA is exercising its discretionary authority under section 301(a) and 301(d)(4) of the CAA to promulgate such FIP provisions as are necessary or appropriate to protect air quality within the Fort Hall Indian Reservation. EPA's ultimate goal, which is being initiated by this FIP proposal, is to ensure that all persons residing and working in and traveling through the Fort Hall PM-10 nonattainment area can breathe air that meets appropriate PM-10 levels.

EPA has used the PM-10 planning requirements applicable to states with PM-10 nonattainment areas, including the statutory requirements provided for in section 172(e) that apply to areas that are not attaining a NAAQS standard as of the date that standard is relaxed, as a guide in determining what is necessary

or appropriate for the protection of air quality in the Fort Hall PM-10 nonattainment area. The Clean Air Act requires states to impose RACT on major stationary sources of PM-10 in moderate PM-10 nonattainment areas. See sections 172(c)(1) and 189(a)(1)(C) of the CAA. Section 172(e) requires areas that are subject to its provisions to implement controls that are no less stringent than the controls applicable to areas designated nonattainment prior to the relaxation of a standard.

This FIP proposal contains emission limits and work practice requirements that EPA believes represent RACT, along with related monitoring, recordkeeping, and reporting requirements, for PM-10 emissions from the FMC facility that emanate from the Fort Hall PM-10 nonattainment area. EPA believes that many sources at FMC currently employ RACT-level controls. For point sources that EPA believes currently employ RACT-level controls, the FIP proposes mass emissions limits based on current actual maximum daily emission rates from these point sources and opacity limits designed to keep PM-10 emissions at current levels. For area sources that EPA believes currently employ RACT-level controls, the FIP proposes opacity limits and work practice requirements designed to keep emissions at current levels.

The largest sources of PM-10 emissions at the FMC facility are the slag pit and related slag handling operations, the elevated secondary condenser and ground flares, and the

calciners. EPA believes that these sources do not currently employ RACT-level controls, and that additional process changes and control technology will be necessary to achieve the emission limits and work practice requirements proposed in this notice as representing RACT for these sources. EPA also believes additional process changes and control technology will be necessary for the phosphorous loading dock and the furnace building to achieve the emission limits and work practice requirements proposed in this notice as representing RACT for these sources.

The controls required to comply with the proposed emission limits and work practice requirements will be costly--an estimated $49 million dollars in capital expenditures over the next three years and annual costs for monitoring, work practice requirements, recordkeeping, and reporting of up to $202,000. EPA nonetheless believes the controls needed to comply with the requirements of this proposed FIP are both technologically and economically feasible. In developing the FIP proposal, EPA has carefully evaluated alternative control technologies for each source at FMC, including the incremental emission reductions and estimated cost of installing, operating, and maintaining these alternative control technologies. In addition, in connection with the settlement of alleged violations of the Resource Conservation and Recovery Act at the FMC facility, FMC has agreed

to expend more than $64[4] million in capital costs to implement 13 PM-10 reduction projects at the facility. Five of these projects include the controls that EPA believes are necessary to comply with the proposed FIP. EPA believes that the remaining eight projects will better enable FMC to comply with the requirements of the proposed FIP. FMC's commitment to install and operate the 13 PM-10 reduction projects for five years as part of the RCRA settlement is persuasive evidence that the control technology identified in this FIP proposal is both technologically and economically feasible.

EPA also believes that this FIP proposal is necessary in order to ensure that PM levels in the Fort Hall PM-10 nonattainment area do not endanger public health, and that emissions reductions will be achieved on a time frame that will contribute to attainment of the revised PM-10 NAAQS as expeditiously as practicable. To achieve these goals, EPA believes that PM-10 emissions from the FMC facility must be reduced by approximately 65%. EPA anticipates that the emission limitation and work practice requirements in this proposed FIP, when considered together, will result in an overall reduction in PM emissions of approximately 69%.

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[4]The difference in the estimated amount of expenditures EPA believes is necessary to comply with the proposed FIP ($49 million) and the amount of capital expenditures FMC has agreed to incur under the RCRA consent decree ($64 million) is due to the fact that EPA believes that only five of the SEP projects are necessary in order to comply with the proposed FIP.

To further these objectives, EPA is proposing a rigorous compliance schedule. For sources that EPA believes currently employ RACT-level controls, the FIP proposes to require compliance with the proposed emission limits and work practice requirements 60 days after the effective date of the FIP. For those sources that EPA believes will require substantial modification in order to comply with the proposed emission limits and work practice standards, EPA proposes to give FMC time to complete the necessary engineering work, design, construction, and initial operation. EPA is proposing that all RACT control requirements necessary to maintain public health protection and contribute to attainment of the revised PM-10 standards in the Fort Hall PM-10 nonattainment area will be in place and fully operational by April 1, 2002. Many of the new controls should be in place well before that time. EPA does not expect PM values above the level of the revised PM-10 NAAQS to be recorded on the Tribal monitors after April 1, 2002. Because attainment of the PM-10 NAAQS requires three calendar years of clean data, however, the area may not be eligible for an attainment designation for the applicable PM-10 standards until after that date. Given the number and extent of the projects FMC will need to undertake to achieve compliance with the proposed FIP, as well as the amount of necessary expenditures, EPA believes that the proposed FIP schedule achieves implementation of RACT as expeditiously as

practicable.

In addition to requiring the imposition of control requirements on sources of PM-10 emissions in PM-10 nonattainment areas subject to the pre-existing PM-10 standards, the Clean Air Act requires states with nonattainment areas to meet several other PM-10 planning requirements, such as enacting contingency measures, meeting quantitative milestones which demonstrate reasonable further progress toward attainment, implementing a permit program for construction and modification of new and modified major stationary sources, and imposing controls on major stationary sources of PM-10 precursors except where PM-10 precursors do not contribute significantly to nonattainment.

As discussed above, EPA is promulgating this FIP for FMC, a facility located in Indian country on the Fort Hall Indian Reservation, under the discretionary authority granted to EPA under sections 301(a) and 301(d)(4) of the CAA. Because of the longstanding PM-10 nonattainment problem in the Fort Hall PM-10 nonattainment area, EPA believes it is necessary and appropriate to focus the efforts of this proposed FIP on the RACT-level emissions reduction requirements that EPA believes will maintain public health protection in the transition to the revised PM standards and that will ultimately assist in attaining those standards as expeditiously as practicable. Based on available information, EPA believes that implementation of RACT for sources

of primary particulate matter at FMC, as proposed in this notice, will achieve these objectives. EPA will address the other PM-10 planning obligations that apply to states with PM-10 nonattainment areas subject to the pre-existing PM-10 NAAQS, as necessary or appropriate, in future rulemaking proposals.

D. Public Involvement in the FIP Process

EPA believes that public involvement at the local level is critical to the successful development and ultimate implementation of any air quality planning effort. To that end, EPA, the Idaho Department of Environmental Quality (IDEQ), and the Tribes established a Citizens Advisory Committee (CAC) in the early 1990s, made up of representatives of local elected officials, transportation planning organizations, and local citizen health and environmental organizations. The CAC actively participated in the oversight of the development of a comprehensive PM-10 plan for what was then called the “Power-Bannock Counties PM-10 nonattainment area.” This comprehensive plan was the basis for the state implementation plan (SIP)for the portion of the nonattainment area located on State lands (now known as the “Portneuf Valley PM-10 nonattainment area”). EPA participated in the State’s public workshops on the SIP and attended the public hearings on the SIP. In addition, EPA used the technical products developed by EPA, the Tribes, and IDEQ, as well as the State SIP, as a basis for developing this FIP

proposal for FMC in the Fort Hall PM-10 nonattainment area.

EPA has also worked extensively with the Air Quality Program of the Shoshone-Bannock Tribes in the development of this FIP proposal and provided periodic updates to the Fort Hall Business Council, the governing body of the Tribes, on the development of the FIP. EPA has also held several public workshops and meetings seeking public input on the control strategy, both from members of the Shoshone-Bannock Tribes and citizens living on State lands adjacent to the Reservation. EPA has also made significant efforts to keep local elected officials and the congressional delegation informed of the implications of this proposed FIP and other related actions.

In September 1997, EPA conducted two public workshops on the general content and scope of the FIP. One workshop was held on the Fort Hall Indian Reservation and a second workshop was held in Pocatello. There were several themes that emerged during these public workshops. First, most citizens of the Fort Hall Indian Reservation and the Pocatello area want clean healthful air. Tribal members in particular expressed concern that the Federal government exercise its trust responsibility to ensure Clean Air Act protections on the Reservation. Commenters pointed out that, because air pollution from FMC is plainly visible, its impact is commonly perceived as extensive and regularly invokes critical attention in the local media. Because FMC is a major

employer of Tribal members and residents of the Pocatello area, however, there is also a concern about the continued economic viability of FMC if costly air pollution and other environmental controls are required. EPA has never received any information from FMC to establish that the controls necessary to meet the PM-10 planning requirements of the Clean Air Act would require closure of the FMC facility. In fact, during the week the public workshops were held in Fort Hall and Pocatello in September 1997, the plant manager for the FMC facility stated in a radio broadcast that FMC had made a corporate commitment to expend $120 million for environmental controls at the FMC facility, of which approximately $85 million was targeted for air pollution control.

Finally, EPA has participated in several meetings of a Citizens Advisory Panel(CAP) facilitated through the Idaho State University and sponsored by FMC and J.R. Simplot, the two largest industrial facilities in the Fort Hall and Pocatello areas. The purpose of the CAP is to discuss environmental issues relating to the Fort Hall and Pocatello areas. EPA has attended several meetings of the CAP in order to present updates on the PM-10 planning process for the Fort Hall PM-10 nonattainment area and to seek public input.

After this proposed action is signed and published in the Federal Register, EPA will hold a public workshop. The workshop, which has not yet been scheduled, will provide an opportunity for

EPA to explain to the community why it is proposing this FIP, what measures are included in the proposal, and who will potentially be impacted by the proposal. The workshop will also provide the community an opportunity to ask questions of EPA and to make suggestions with respect to this proposed action. EPA will announce the time, date, and location of the public workshop through local newspapers several weeks in advance of the workshop.

Following the public workshop, EPA will hold a public hearing on this FIP proposal from 6:00 p.m. to 9:00 p.m. on March 18, 1999, at the Chambers of the Fort Hall Business Council. During the public hearing, EPA will be taking formal comment on the FIP proposal. The public comment period will begin upon publication of the FIP proposal and will remain open for 30 days after the public hearing. EPA encourages everyone who has an interest in this proposed action to comment during the public comment period. EPA will consider all comments received during the public comment period.

II. Background

A. Clean Air Act Requirements

1. Designation and Classification

On the date of enactment of the 1990 Clean Air Act Amendments, PM-10 areas meeting the conditions of section 107(d) of the Act were designated nonattainment for the PM-10 NAAQS by

operation of law. The Power-Bannock Counties PM-10 nonattainment area was designated as a PM-10 nonattainment area through this process. Once an area is designated nonattainment, section 188 of the CAA outlines the process for classification of the area and establishes the area's attainment date. In accordance with section 188(a), at the time of designation, all PM-10 nonattainment areas were initially classified as “moderate” by operation of law, with an attainment date of December 31, 1994. 56 FR 11101 (March 15, 1991).

A moderate area could subsequently be reclassified as “serious” under CAA section 188(b)(1), if, at any time, EPA determined that the area could not practicably attain the PM-10 NAAQS by the applicable attainment date. In addition, a moderate area would be reclassified by operation of law if EPA determined after the applicable attainment date that, based on actual air quality data, the area had not attained the standard by the attainment date. CAA section 188(b)(2).

Effective December 7, 1998, the Power-Bannock Counties PM-10 nonattainment area was split into two nonattainment areas at the boundary between the Fort Hall Indian Reservation and State lands. The Fort Hall PM-10 nonattainment area consists of land within the former Power-Bannock Counties PM-10 nonattainment area that lies within the exterior boundaries of the Fort Hall Indian Reservation. The Portneuf Valley PM-10 nonattainment area

consists of the remaining portion of the former Power-Bannock Counties PM-10 nonattainment area. See 63 FR 59722 (November 5, 1998). Both the Fort Hall PM-10 nonattainment area and the Portneuf Valley PM-10 nonattainment area continue to be classified as moderate PM-10 nonattainment areas.

2. EPA's Authority to Promulgate a FIP in Indian Country

The Clean Air Act Amendments of 1990 greatly expanded the role of Indian tribes in implementing the provisions of the Clean Air Act in Indian country. Section 301(d) of the Act authorizes EPA to issue regulations specifying the provisions of the Clean Air Act for which Indian tribes may be treated in the same manner as states. See CAA sections 301(d)(1) and (2). EPA promulgated the final rule under section 301(d) of the Act, entitled "Indian Tribes: Air Quality Planning and Management," on February 12, 1998. 63 FR 7254. The rule is generally referred to as the "Tribal Authority Rule" or "TAR".

In the preamble to the proposed[5] and final rule, EPA discusses generally the legal basis under the CAA by which EPA and tribes are authorized to regulate sources of air pollution in Indian country. EPA concluded that the CAA constitutes a statutory grant of jurisdictional authority to Indian tribes that allows them to develop air programs for EPA approval in the same manner as states. 63 FR at 7254-7259; 59 FR 43958-43960.

[5] See 59 FR 43956 (August 25, 1994).

EPA also concluded that the CAA authorizes EPA to protect air quality throughout Indian country, including on fee lands. See 63 FR 7262; 59 FR 43960-43961 (citing to CAA sections 101(b)(1), 301(a), and 301(d)). In fact, in promulgating the TAR, EPA specifically provided that, pursuant to the discretionary authority explicitly granted to EPA under sections 301(a) and 301(d)(4) of the Act, EPA

> "shall promulgate without unreasonable delay such federal implementation plan provisions as are necessary or appropriate to protect air quality, consistent with the provisions of sections 304(a) and 301(d)(4), if a tribe does not submit a tribal implementation plan meeting the completeness criteria of 40 CFR part 51, Appendix V, or does not receive EPA approval of a submitted tribal implementation plan."

63 FR at 7273 (codified at 40 CFR 49.11(a)).[6]

It is EPA's policy to aid tribes in developing comprehensive and effective air quality management programs by providing technical and other assistance to them. EPA recognizes, however, that just as it required many years to

[6]In the preamble to the final TAR, EPA explained that it believed it was inappropriate to treat tribes in the same manner as States with respect to section 110(c) of the Act, which directs EPA to promulgate a FIP within two years after EPA finds a state has failed to submit a complete state plan or within two years after EPA disapproval of a state plan. In lieu of section 110(c), EPA promulgated 40 CFR 49.11(a) to clarify that EPA will continue to be subject to the basic requirement to issue any necessary or appropriate FIP provisions for affected tribal areas within some reasonable time. See 63 FR 7264-7265.

develop state and federal programs to cover lands subject to state jurisdiction, it will also require time to develop tribal and federal programs to cover reservations and other lands subject to tribal jurisdiction. 59 FR at 43961.

The Shoshone-Bannock Tribes have expressed a strong interest in seeking authority under the TAR to regulate sources of air pollution located on the Reservation under the Clean Air Act. Based on discussions with the Tribes, however, EPA believes that it will be at least several months before the Tribes will be ready to seek authority under the TAR to assume Clean Air Act planning responsibilities and that, when they do so, the Tribes intend to build their capacity and seek authority for the various Clean Air Act programs over time, rather than all at once. The Tribes have advised EPA that they continue to support EPA's efforts to impose such controls on FMC as are necessary to bring the Fort Hall PM-10 nonattainment area into attainment with the PM-10 NAAQS as quickly as possible, notwithstanding the recent promulgation of the TAR.

Therefore, in this proposed FIP, EPA is exercising its discretionary authority under section 301(a) and 301(d)(4) of the CAA and 40 CFR 49.11(a) to promulgate such FIP provisions as are necessary or appropriate to protect air quality within the Fort Hall Indian Reservation. The Shoshone-Bannock Tribes have not submitted a tribal implementation plan to address PM-10 emissions

from FMC and have indicated to EPA that they prefer to have EPA address PM-10 emissions from FMC at this time. Given the longstanding air quality concerns in the area, EPA believes that the proposed FIP provisions are both necessary and appropriate to protect air quality on the Reservation.

3. Moderate Area Planning Requirements for States

The air quality planning requirements for states with PM-10 nonattainment areas under the pre-existing NAAQS are set out in subparts 1 and 4 of title I of the Clean Air Act. EPA has issued a "General Preamble" describing EPA's preliminary views on how the Agency intends to review state implementation plans and SIP revisions submitted by states under title I of the Act, including those state submittals containing moderate PM-10 nonattainment area SIP provisions.[7] Although these moderate area planning requirements are not directly applicable to EPA in this rulemaking, EPA believes it is appropriate to use the planning requirements applicable to states with PM-10 nonattainment areas as a guide where, as here, EPA is acting to ensure maintenance of healthy PM air quality within Indian country through direct federal implementation.

Those states containing initial moderate PM-10 nonattainment areas were required to submit, among other things, the following

[7]See "State Implementation Plans; General Preamble for the Implementation of Title I of the Clean Air Act Amendments of 1990," (General Preamble) 57 FR 13498 (April 16, 1992) and 57 FR 18070 (April 28, 1992).

provisions by November 15, 1991:

(a) Provisions to assure that reasonably available control measures (RACM) (including such reductions in emissions from existing sources in the area as may be obtained through the adoption, at a minimum, of reasonably available control technology (RACT)) shall be implemented no later than December 10, 1993 (CAA sections 172(c)(1) and 189(a)(1)(C));

(b) Provisions to assure implementation of RACT on major stationary sources of PM-10 precursors except where EPA has determined that such sources do not contribute significantly to exceedences of the PM-10 standards (CAA section 189(e));

(c) Either a demonstration (including air quality modeling) that the plan will provide for attainment as expeditiously as practicable but no later than December 31, 1994 or a demonstration that attainment by that date is impracticable (CAA section 189(a)(1)(B));

(d) For plan revisions demonstrating attainment, quantitative milestones which are to be achieved every three years and which demonstrate reasonable further progress (RFP), as defined in section 171(l), toward attainment by the applicable attainment date (CAA section 189(c));

(e) For plan revisions demonstrating impracticability, such annual incremental reductions in PM-10 emissions as are required by part D of the Act or may reasonably be required by the

Administrator for the purpose of ensuring attainment of the PM-10 NAAQS by the applicable attainment date (CAA sections 172(c)(2) and 171(1));

(f) A permit program for the construction and operation of new and modified major stationary sources of PM-10 (see Section 189(a) of the Act); and

(g) Contingency measures, which become effective without further action by EPA upon a determination that the area has failed to achieve reasonable further progress or to attain the PM-10 NAAQS by the attainment date (see Section 172(c)(9) of the Act).

Moderate area plans were also required to meet the generally applicable SIP requirements for reasonable notice and public hearing under section 110(a)(l); necessary assurances that the implementing agencies have adequate personnel, funding and authority under section 110(a)(2)(E)(i) and 40 CFR 51.280; and the description of enforcement methods as required by 40 CFR 51.111, and EPA guidance implementing these provisions.

4. Serious Area Planning Requirements for States

PM-10 nonattainment areas under the pre-existing NAAQS that are reclassified as serious under section 188(b)(2) of the Act (for failing to attain by the applicable attainment date) are required to submit, within 18 months of the area's reclassification, SIP provisions providing for, among other

things, the adoption and implementation of best available control measures (BACM), including best available control technology (BACT), for PM-10 no later than four years from the date of reclassification. The SIP must also contain a demonstration that its implementation will provide for attainment of the PM-10 NAAQS. These requirements are in addition to the moderate PM-10 nonattainment requirements of RACT/RACM. These and other requirements applicable to states with serious PM-10 nonattainment areas are discussed in more detail in EPA's guidance document, "State Implementation Plans for Serious PM-10 Nonattainment Areas, and Attainment Date Waivers for PM-10 Nonattainment Areas Generally; Addendum to Preamble for Implementation of Title I of the Clean Air Act Amendments of 1990," 59 FR 41988 (August 16, 1994).

B. History of PM-10 Planning in the Fort Hall PM-10 Nonattainment Area.

1. Background

The Power-Bannock Counties PM-10 nonattainment area was designated nonattainment for the pre-existing PM-10 NAAQS and classified as moderate under sections 107(d)(4)(B) and 188(a) of the Clean Air Act upon enactment of the Clean Air Act Amendments of 1990 (Act or CAA). See 40 CFR 81.313 (PM-10 Initial Nonattainment Areas); see also 55 FR 45799 (October 31, 1990); 56 FR 11101 (March 15, 1991); 56 FR 37654 (August 8, 1991); 56 FR

56694 (November 6, 1991). For an extensive discussion of the history of the designation of the Power-Bannock Counties PM-10 nonattainment area, please refer to the discussion at 61 FR 29667, 29668-29670 (June 12, 1996). The original attainment date for the area was December 31, 1994. The attainment date was later extended to December 31, 1995, and then to December 31, 1996, under the authority of section 188(d) of the Act. See 61 FR 20730 (May 8, 1996) (first one-year extension); 61 FR 66602 (December 18, 1996)(second one-year extension).

Effective December 7, 1998, the Power-Bannock Counties PM-10 nonattainment area was split into two nonattainment areas at the boundary between the Fort Hall Indian Reservation and State lands: the Fort Hall PM-10 nonattainment area and the Portneuf Valley PM-10 nonattainment area. For a more detailed discussion of the rationale for EPA's decision to split the Power-Bannock County PM-10 nonattainment area into two separate PM-10 nonattainment areas, please refer to the discussion at 63 FR 33597 (June 19, 1998)(proposed action) and 63 FR 59722 (November 5, 1998)(final action). Both the Fort Hall PM-10 nonattainment area and the Portneuf Valley PM-10 nonattainment area continue to be classified as moderate PM-10 nonattainment areas.

The boundary between the two nonattainment areas runs through an area known as the "industrial complex," which is comprised of two major stationary sources of PM-10. FMC is

located primarily on fee lands within the exterior boundary of the Fort Hall Indian Reservation and primarily within the Fort Hall PM-10 nonattainment area.[8] J.R. Simplot Corporation (Simplot) is located on State lands immediately adjacent to the Reservation in the Portneuf Valley PM-10 nonattainment area.

2. PM-10 Planning for the Portneuf Valley PM-10 Nonattainment Area

After the Power-Bannock Counties PM-10 nonattainment area was designated nonattainment, IDEQ, the Shoshone-Bannock Tribes, and EPA began to work together in the early 1990s to prepare the technical elements needed to bring the area into attainment and meet the planning requirements of title I of the Act. Based on these technical products, IDEQ, along with several local agencies, developed and implemented control measures on PM-10 sources in what is now known as the Portneuf Valley PM-10 nonattainment area. The State submitted these control measures to EPA in 1993 as a moderate PM-10 nonattainment state implementation plan revision under section 189(a) of the Act. Although the State had, in the past, sought to regulate sources

[8]A small portion of the FMC facility extends on to State lands. The only PM-10 sources of potential significance on this portion of FMC property (i.e., on State lands) are a few raw materials piles and a small number of unpaved access roads, which sources collectively account for less than one percent of total PM-10 emissions from the FMC facility. The limits proposed in this notice do not apply to the portion of the FMC facility on State lands. EPA expects Idaho to address the sources at FMC on State lands in a SIP revision.

on fee lands within the Fort Hall Indian Reservation,[9] the SIP revision submitted by the State in May 1993 did not purport to impose control requirements on FMC or other sources on fee or trust lands within the exterior boundaries of the Reservation.

The control measures submitted by the State include a comprehensive residential wood combustion program, including a mandatory woodstove curtailment program; stringent controls on fugitive road dust, including controls on winter road sanding and a limited road paving program; and a revised operating permit for the J.R. Simplot facility, the only major stationary source of PM-10 on State lands within the nonattainment area.

EPA has not yet taken final action to approve the State's moderate PM-10 SIP for the area. EPA has previously stated, however, based on EPA's preliminary review in the context of approving the State's requests for extensions of the attainment date, that these control measures substantially meet EPA's guidance for RACM, including RACT, for sources of primary particulate. See 61 FR 66602, 66604-66605 (December 18, 1996). EPA will take action on IDEQ's SIP revision for the Portneuf Valley PM-10 nonattainment area in a separate rulemaking.

3. PM-10 Planning for the Fort Hall PM-10 Nonattainment Area

Using the technical products jointly developed by IDEQ, the

[9]Prior to the 1990 amendments to the Clean Air Act, IDEQ had asserted regulatory authority over the sources of air pollution on fee lands in the Fort Hall Reservation, most notably, FMC.

Tribes, and EPA, EPA began to develop, in close consultation with the Tribes, a control strategy for what is now known as the Fort Hall PM-10 nonattainment area. As stated above, EPA and the Tribes believe that the primary, if not sole, cause of the continued PM-10 violations that have been recorded on the PM-10 monitors located within the Reservation are PM-10 emissions from the FMC facility. Therefore, in developing the control strategy, EPA and the Tribes focused on developing control requirements for PM-10 emissions from FMC.

At the same time, the Tribes began developing the infrastructure for running a tribal air quality program, including hiring staff, enacting authorizing legislation, drafting air quality regulations, establishing an air monitoring network, and participating in regional air quality planning efforts. The Tribes were very interested in seeking authority to regulate sources of air pollution within the exterior boundaries of the Fort Hall Indian Reservation under the Clean Air Act once EPA promulgated authorizing regulations under section 301(d) of the CAA.

Originally, it was thought that a PM-10 control strategy for FMC would be completed before promulgation of the TAR, that is, before the Tribes were in a position to obtain authority under the Clean Air Act to carry out PM-10 planning within the Reservation. For this reason, EPA took the lead in developing a

PM-10 control plan for what is now known as the Fort Hall PM-10 nonattainment area, and, in particular, developing a control strategy for FMC, with the intent of promulgating a Federal Implementation Plan for FMC in close consultation with the Tribes. Because of several setbacks in the planning process, however, EPA was not able to promulgate or even propose a FIP for the area before the TAR was promulgated in February 1998.

Because of resource constraints, the Tribes have advised EPA they intend to build their capacity and seek authority for the various Clean Air Act programs under the TAR over time, rather than all at once. In light of the substantial resources EPA has already expended in developing a control strategy for FMC and the technical complexities of controlling PM-10 emissions from FMC, the Tribes have requested that EPA continue with the development and promulgation of a FIP for the FMC facility, even though the Tribes now have the ability to seek authority to regulate FMC under the Clean Air Act. The Tribes have advised EPA that they will continue to develop and request EPA approval of a general air pollution program for sources within the Reservation, including any additional PM controls for other PM sources (e.g., area sources and minor stationary sources) that may be determined to be necessary to protect air quality.

EPA believes that, in circumstances such as exist here, it is appropriate for EPA to step in and fill the current gap in

Clean Air Act protection by direct federal implementation of Clean Air Act requirements, in this case, implementation of measures to control PM-10 emissions from the FMC facility originating within the Reservation. The Tribes have not submitted a tribal implementation plan to control PM-10 emissions for FMC and have indicated to EPA that the Tribes prefer that EPA take the lead in this area at this time. EPA is therefore exercising its discretionary authority under sections 301(a)and 301(d)(4) of the Act and 40 CFR 49.11(a) to promulgate a FIP containing control measures and other requirements for the FMC facility. EPA is proposing these emission limitations and related control requirements to provide federally-enforceable PM-10 requirements on FMC in accordance with the Clean Air Act provisions specifically calling for the implementation of control measures in PM-10 nonattainment areas. See, e.g., CAA section 189(a)(1)(C). EPA believes direct federal implementation of control measures is necessary and appropriate to ensure maintenance of healthy air quality in Indian country and is proposing to act here to improve air quality in the Fort Hall PM-10 nonattainment area during the transition to new PM standards.

4. Portneuf Environmental Council Lawsuit

On November 20, 1997, the Portneuf Environmental Council (PEC) filed suit against EPA alleging that EPA had failed to make a finding whether the Power-Bannock Counties PM-10 nonattainment

area had attained the PM-10 NAAQS by the December 31, 1996, extended attainment date, as provided for in CAA section 188(b)(2)(A). During settlement discussions, PEC indicated that it was considering amending its complaint to allege that EPA has unreasonably delayed promulgation of a FIP addressing PM-10 planning requirements for what is now known as the Fort Hall PM-10 nonattainment area, and, more specifically, for failing to impose controls on PM-10 emissions from FMC.

As part of the settlement with PEC, EPA agreed to sign a Federal Register notice proposing a FIP to control PM-10 emissions in the area by January 31, 1999. EPA also agreed to take final action on the FIP proposal no later than July 31, 2000. A copy of the settlement agreement between EPA and PEC is in the docket. Although EPA had been working on a FIP proposal for the FMC facility in order to ensure attainment of the PM-10 NAAQS long before the PEC filed its suit against EPA, in issuing this proposal, EPA is also responding to PEC's lawsuit and the resulting settlement agreement between EPA and PEC.

5. Proposed Finding of Failure to Attain and Reclassification to Serious

On June 19, 1998, EPA published a Federal Register notice in which EPA proposed to make a finding that the Fort Hall PM-10 nonattainment area failed to attain the PM-10 NAAQS by the applicable attainment date of December 31, 1996. If EPA takes

final action on that proposal, the Fort Hall PM-10 nonattainment area would be reclassified as a serious PM-10 nonattainment area by operation of law under section 188(b)(2) of the Act. In general, the serious area planning requirements are in addition to, and do not take the place of, the moderate area planning requirements. As noted earlier, the outcome of the final action will likely depend on determinations made by EPA when it promulgates the section 172(e) rule.

C. Air Quality Monitoring Data

1. Tribal Monitoring Sites

The former Power-Bannock Counties PM-10 nonattainment area was originally designated nonattainment for PM-10 based on monitors located on State lands within the nonattainment area that showed violations of the pre-existing 24-hour and annual PM-10 standard in the late 1980s and early 1990s. Although there were no PM-10 monitors located on the Reservation at this time, dispersion modeling conducted to support the PM-10 planning efforts for the area predicted high PM-10 concentrations on the Reservation in the vicinity of FMC in what is now known as the Fort Hall PM-10 nonattainment area.

In the mid-1990s, the Tribes requested and EPA granted the Tribes additional program support grant funds to enable the Tribes to establish their own monitoring stations in order to collect ambient air quality data representative of conditions on

the Reservation and to generate data to support Tribal air quality planning efforts. This monitor, called the “Sho-Ban site,” is located approximately 100 feet north of the FMC facility across a frontage road. Due to operational problems with the sampler and quality assurance problems, valid data was not reported for this monitor until October 1, 1996. Also in October 1996, the Tribes initiated monitoring at two new sites. The “primary site” is located approximately 100 feet north of the FMC facility across the frontage road, approximately 600 feet east of the Sho-Ban site and approximately 600 feet from the boundary between the Fort Hall Indian Reservation and State lands. Both the Sho-Ban and primary sites are located in the area of expected maximum concentrations of PM-10 in the ambient air. The “background site” is located approximately one and one-half miles southwest of the FMC facility upwind of the predominant wind direction from the industrial complex.

All three Tribal monitoring sites are owned by the Tribes and operated by a contractor for the Tribes. The Tribal monitors meet EPA SLAMS network design and siting requirements, set forth at 40 CFR part 58, appendices D and E. A description of the monitoring network and instrument siting relative to the EPA SLAMS siting criteria, as specified in 40 CFR part 58, appendices D and E, can be found in the technical support document (TSD) and the air quality data report in the docket for this proposal.

The air quality data for the period from October 8, 1996, to December 31, 1996, was validated by the Shoshone-Bannock Tribes. EPA has reviewed the air quality data collected and reported by the Tribes during this period and quality assured the data for precision and accuracy prior to entering the data into the AIRS data base. In addition, a contractor with extensive experience in operating large state monitoring networks conducted an independent audit of the Tribal monitoring data. The audit included a review of both the sampling effort and filter analysis, and concluded that the data reported by the Tribes during 1996 and 1997 was valid and reliable data.

Both the Sho-Ban and primary sites have recorded numerous PM-10 concentrations above the level of the pre-existing 24-hour PM-10 NAAQS since October 1996. Table 1 lists each of the monitoring sites in the Fort Hall PM-10 nonattainment area where the 24-hour PM-10 NAAQS was exceeded between 1994 and 1997. Table 2 lists the concentration, in micrograms per cubic meter, of each exceedence.

Table 1.--Fort Hall PM-10 Monitoring Data--1994, 1995, 1996

Site	Year	Number of exceedences	Expected exceedences	3 year average
Primary.....	1994	No data.....	Assume 0.....	Assume 0
	1995	No data.....	Assume 0.....	Assume 0
	1996	18.....	20.96.....	7.0
	1997	19.....	20.1.....	13.69
Sho-Ban.....	1994	No data.....	Assume 0.....	Assume 0
	1995	No data.....	Assume 0.....	Assume 0
	1996	9.....	11.34.....	3.78
	1997	12.....	14.....	8.4
Background Site	1994	No data.....	Assume 0.....	Assume 0
	1995	No data.....	Assume 0.....	Assume 0
	1996	0.....	0.00.....	0.00
	1997	1.....	1.05.....	.35

Table 2.--PM-10 Exceedences at Tribal Monitors

ND = No Data Reported

* = level above 24-hour standard

Date	Primary site (ug/m3)	Sho-ban site (ug/m3)	Background site (ug/m3)
Oct. 10, 1996	165*	118	56
Oct. 16, 1996	199*	ND	57
Oct. 18, 1996	184*	193*	ND
Oct. 22, 1996	200*	ND	7
Oct. 24, 1996	229*	ND	ND
Nov. 17, 1996	124	245*	3
Nov. 18, 1996	277*	85	1
Nov. 19, 1996	420*	135	5
Nov. 28, 1996	109	163*	8
Dec. 3, 1996	167*	128	8
Dec. 4, 1996	90	199*	9
Dec. 9, 1996	184*	199*	3
Dec. 10, 1996	132	208*	2
Dec. 15, 1996	219*	53	1
Dec. 20, 1996	156*	ND	18
Dec. 24, 1996	174*	36	2
Dec. 25, 1996	174*	56	1
Dec. 26, 1996	317*	111	0
Dec. 27, 1996	236*	48	0
Dec. 29, 1996	290*	282*	0
Dec. 30, 1996	187*	293*	3
Dec. 31, 1996	186*	442*	2
Jan. 1, 1997	268*	409*	5
Jan. 2, 1997	161*	94	ND
Jan. 22, 1997	165*	ND	1
Jan. 25, 1997	13	ND	246*
Feb. 14, 1997	222*	35	2
Feb. 17, 1997	198*	45	6

Feb. 19, 1997.....	215*	259*	2
Mar. 1, 1997.....	223*	221*	6
Mar. 2, 1997.....	196*	91	4
Mar. 9, 1997.....	239*	139	2
Mar. 10, 1997.....	337*	95	3
Mar. 11, 1997.....	206*	77	4
Mar. 18, 1997.....	77	173*	9
Mar. 26, 1997.....	166*	ND	26
Mar. 30, 1997.....	96	234*	10
Jun. 3, 1997.....	87	167*	23
Aug. 26, 1997.....	86	184*	33
Sept. 13, 1997.....	145	230*	69
Sept. 14, 1997.....	128	346*	ND
Sept. 15, 1997.....	167*	91	25
Sept. 26, 1997.....	222*	79	42
Oct. 3, 1997.....	186	156*	2
Oct. 4, 1997.....	254*	128	19
Oct. 5, 1997.....	273*	46	10
Oct. 8, 1997.....	80	200*	10
Oct. 9, 1997.....	68	271*	30
Dec. 17, 1997.....	158*	67	1
Dec. 27, 1997.....	160*	59	101
Dec. 29, 1997.....	245*	69	3

According to 40 CFR part 50, the pre-existing 24-hour PM-10 NAAQS is attained when the expected number of days per calendar year with a 24-hour average concentration above 150 ug/m3, averaged over three years, is equal to or less than one. Because the Tribal monitoring sites did not begin full operation until October 1996, the data base is less than the three years of data generally needed for a determination of compliance with the pre-existing 24-hour PM-10 NAAQS under 60 CFR 50.6. Nevertheless, the number of PM-10 concentrations above the level of the 24-hour PM-10 NAAQS between October 8, 1996, and December 31, 1996 results in the Sho-Ban and primary monitors showing a violation of the pre-existing 24-hour PM-10 NAAQS as of the December 31, 1996 attainment date for the area. Appendix K of 40 CFR part 50 contains “gap filling” techniques for situations where less than three complete years of data are available. In brief, that procedure allows a determination of non-compliance with a standard if it can be unambiguously demonstrated that a violation occurred. With respect to the Sho-Ban and primary sites, the expected exceedence rate of the 24-hour standard, averaged over the years 1994, 1995, and 1996, for each site is substantially greater than the 1.1 allowed for under the pre-existing PM-10 NAAQS, even if the days during which the monitors did not operate or collect valid data had reported zero PM-10 levels. For example, the expected exceedence rate for 1996 was

20.96 at the primary site and 11.34 at the Sho-Ban site. When this rate is averaged with an assumed zero for 1994 and 1995, the three-year average expected exceedence rate of 7.0 for the primary site and 3.78 for the Sho-Ban site are above the 1.1 required to show attainment of the pre-existing 24-hour PM-10 NAAQS. In other words, even if there were zero exceedences from January 1, 1994, to October 8, 1996, a violation of the standard would have occurred because of the number of exceedences that occurred from October 8, 1996, to December 31, 1996. EPA therefore believes that the Sho-Ban and primary monitors document a violation of the pre-existing 24-hour NAAQS for PM-10 under 40 CFR 50.6 using calendar year data from 1994, 1995, and 1996.

EPA also believes that the Sho-Ban and primary monitors document a violation of the pre-existing 24-hour NAAQS for PM-10 as of December 1997 (using calendar year data from 1995, 1996, and 1997). The primary site recorded exceedences of the pre-existing PM-10 standard on 19 days during 1997, resulting in an expected exceedence rate for 1997 of 20.1. Similarly, the Sho-Ban site recorded exceedences of the pre-existing standard on 12 days during 1997, resulting in an exceedence rate of 14. The three-year average of exceedence rates for calendar years 1995, 1996, and 1997 were 13.69 and 8.4, respectively, for the primary and Sho-Ban sites. The PM-10 values recorded on the Tribal

monitors in 1998 have been fairly consistent with the values recorded during 1996 and 1997.

None of the Tribal monitors has collected sufficient data to make an attainment determination with respect to the pre-existing annual PM-10 standard. Generally, three years of data must be collected in order to calculate the three-year average of each year's annual average. The 1997 annual average recorded at the primary site, however, was 66.3 ug/m3, approximately 25% above the annual PM-10 standard, and strongly suggests that a violation of the pre-existing annual standard will be documented once three years of data has been collected at the Tribal monitors.

As discussed above, EPA promulgated revised PM-10 standards on July 18, 1997. See 62 FR 38651. Although the levels of the 24-hour and annual standards remain unchanged, there has been a change in the statistical form for determining compliance with the 24-hour NAAQS (from an expected exceedence rate to averaging the 99th percentile concentration from three years of data) and a change in the procedures for reporting PM-10 concentrations at reference conditions to PM-10 concentrations at local temperature and pressure. Determining compliance with the revised PM-10 standards, even the revised 24-hour PM-10 standard, now requires three calendar years of data. Because the Tribal monitors have only been collecting valid data since

the last quarter of 1996, there is insufficient data at this time to conclude with certainty that the Tribal monitors violate the revised PM-10 standards. Nonetheless, after converting previously reported PM-10 concentrations to local temperature and pressure and calculating the 99th percentile of the data base for each site and the arithmetic mean for each site for each year, EPA believes there is a strong likelihood that the Tribal monitors will document violations of the revised 24-hour and annual PM-10 standards unless there are significant reductions in PM-10 emissions from the FMC facility. The 99th percentile PM-10 concentrations for 1997 were 231 ug/m3 for the primary site and 243 ug/m3 for the Sho-ban site, well above the 24-hour standard of 150 ug/m3. Similarly, the arithmetic annual mean for 1997 was 60 ug/m3 for the primary, again, well above the annual standard of 50 ug/m3. The arithmetic annual mean for 1997 for the Sho-Ban site was 46 ug/m3, just below the level of the standard.

Please refer to the air quality data report and the TSD in the docket for further discussion and analysis of the air quality data.

2. PM-10 Precursors

Section 189(e) of the Act states that the control requirements applicable under SIPs to major stationary sources of PM-10 must also be applied to major stationary sources of

PM-10 precursors, unless EPA determines such sources do not contribute significantly to PM-10 levels which exceed the PM-10 standard in the area.

Not all particulate in the air is directly emitted as particulate from emission sources. Particulate can also be formed in the air through complex chemical processes involving emission of gaseous pollutants called “precursor gasses”, or “precursors”. The particulate formed in the air are generally referred to as “secondary aerosol.” Precursor gasses of concern in the Fort Hall PM-10 nonattainment area and the Portneuf Valley PM-10 nonattainment area include sulfur dioxide, oxides of nitrogen, and ammonia. The secondary aerosol formed in the atmosphere are ammonium sulfate and ammonium nitrate.

At the beginning of the PM-10 planning process for the former Power-Bannock Counties PM-10 nonattainment area, PM-10 precursors were not thought to contribute to PM-10 levels which exceeded the PM-10 standard. In the winter of 1992, however, the State of Idaho began to analyze particulate matter collected on the PM-10 filters at the State monitoring sites for secondary aerosol contribution. Analysis of the particulate collected on the filters by the State in January 1993, including on the date of an exceedence on January 7, 1993, showed that ammonium sulfate and ammonium nitrate, which are PM-10 precursors, constituted approximately 60% of the measured PM-10 mass.

Filter samples collected on other days with high PM-10 concentrations were selected from the total of a year's routine monitoring at the State monitoring sites and analyzed for secondary aerosol fractions. The results indicated that secondary aerosol was a significant fraction of the total PM-10 mass loading only during cold stagnant winter days with high relative humidity. High PM-10 concentrations measured and analyzed during other meteorological conditions did not have a significant aerosol contribution. This new information necessitated a reevaluation of the contribution of PM-10 precursors to the nonattainment problem in the former Power-Bannock Counties PM-10 nonattainment area. Accordingly, in conjunction with EPA and the Tribes, the State developed a work plan for analyzing and addressing the contribution of PM-10 precursors to the nonattainment problem in the Power-Bannock Counties PM-10 nonattainment area.

Since PM-10 precursors were first identified in particulate samples collected in January 1993 from the State monitors as a potential contributor to the nonattainment problem in the former Power-Bannock Counties PM-10 nonattainment area, however, no levels above the standard have been recorded at any of the monitors located on State lands in what is now known as the Portneuf Valley PM-10 nonattainment area. Instead, it appears that PM-10 resulting from precursor emissions represent a

significant fraction of the total PM-10 mass loading on the monitors located on State lands only during very specific and rare meteorological conditions--cold stagnant winter days with relative high humidity. Based on the fact that the State monitors have not recorded an exceedence since January 1993, that there have been only two times between 1986 and 1997 in which violations of the PM-10 NAAQS on the State monitors have been attributed to PM-10 precursors, and that all State monitoring sites have attained the standard, it does not appear that major stationary sources of PM-10 precursors contribute significantly to PM-10 levels which exceed the standard within the Portneuf Valley PM-10 nonattainment area.

With respect to the Fort Hall PM-10 nonattainment area, based on data from the State monitors that show secondary aerosol reaches its highest levels at the monitoring sites furthest away from the industrial complex, EPA would not expect PM-10 precursors to contribute significantly to PM-10 levels that exceed the standard on the Tribal monitors, which are located near the industrial complex. In order to confirm the contribution of PM-10 precursors to the exceedences that have been recorded on the Tribal monitors, however, EPA is conducting additional chemical analysis of filters collected from the Tribal monitors as part of a comprehensive study of the types of particles and their chemical composition collected at the Tribal

monitors. If the results of this study demonstrate that PM-10 precursors from major stationary sources contribute significantly to levels that exceed the applicable PM standards in the Fort Hall PM-10 nonattainment area, EPA will determine whether additional controls on FMC and any other major stationary sources of PM-10 precursors within the nonattainment area are necessary or appropriate, to the extent the Shoshone-Bannock Tribes have not submitted a tribal implementation plan addressing such concerns. The State would be required to address any significant PM precursor emissions attributable to sources on State lands that contribute to levels that exceed the applicable PM standards in the Fort Hall PM-10 nonattainment area.

3. Evidence of Adverse Health Effects Attributable to Poor Air Quality

As demonstrated above, the Fort Hall PM-10 nonattainment area violates the pre-existing 24-hour PM-10 standard and may also violate the pre-existing annual PM-10 standard and the revised 24-hour and annual PM-10 standards. A recent report prepared by the U.S. Department of Health and Human Services, Public Health Service, Agency for Toxic Substances and Disease Registry (ATSDR), appears to be consistent with the growing body of epidemiologic evidence showing an association between particulate pollution and respiratory illnesses. The report

looked at the Native American population living on the Fort Hall Indian Reservation and the Native American population living on the Duck Valley Indian Reservation. The Duck Valley Indian Reservation is located in an undeveloped area in northern Nevada and has no known air quality problem. A total of 515 individuals (229 from Fort Hall and 286 from Duck Valley) participated in this study. The study compared pulmonary function, levels of cadmium, chromium, fluoride, and several renal biomarkers in urine specimens, and results from a questionnaire filled out by the participants concerning respiratory symptoms or diseases.

The report reveals a significantly higher incidence of self-reported respiratory symptoms or diseases among the residents living on the Fort Hall Indian Reservation as compared with those living on the Duck Valley Indian Reservation. For example, the incidence of chronic bronchitis was three times higher and the incidence of pneumonia was two times higher for the population living on the Fort Hall Indian Reservation. Differences in respiratory outcomes at the two reservations were greatest when comparing the health of participants younger than 20 years of age. A copy of this report is in the docket. Although this report does not prove that the reported adverse health effects among the Shoshone-Bannock Tribes are caused by the PM-10 nonattainment problem in the Fort Hall PM-10 nonattainment area, the report does support EPA’s concern with

the air quality in the area.

III. FIP Proposal

As discussed above, in this proposed rulemaking, EPA is exercising its discretionary authority under sections 301(a) and 301(d)(4) of the CAA and 40 CFR 49.11(a) to promulgate such FIP provisions as are necessary or appropriate to protect air quality within the Fort Hall PM-10 nonattainment area. Based on information available to EPA, EPA believes that the primary, if not sole, cause of continued violations of the pre-existing 24-hour PM-10 NAAQS that have been recorded on the Tribal monitors are PM-10 emissions from the FMC facility that emanate from within the Fort Hall PM-10 nonattainment area. In this FIP proposal, EPA is proposing controls for the FMC facility that EPA believes represent RACT.

A. Emission Inventory

Section 172(C)(3) of the CAA and 40 CFR 51.114 require that a PM-10 nonattainment plan include a comprehensive, accurate, and current inventory of actual emissions from all sources of the relevant pollutant in the relevant area. An emission inventory is used to identify sources that contribute to measured violations of the NAAQS and to estimate the rate at which these sources emit pollutants into the atmosphere. The source emission data that comprise an emission inventory are used in evaluating the effectiveness of alternative control

technology and the emissions that result from implementation of controls. Emission data are also used to predict air quality benefits from implementation of selected control technologies.

An emission inventory is generally prepared to reflect estimates of actual emissions. Actual emissions are estimates of what a source actually emitted into the atmosphere within a specified time frame, usually on an annual or 24-hour basis, and are used to assess emission conditions that could have led to specific measured air quality. Actual annual emissions are the emissions emitted into the air during the calendar year and are expressed in tons/year. The 24-hour actual emission rates can be expressed in several different ways: average daily emission rates; worst case emission rates for any 24-hour period for each source; or a worst case emission rate for each source during a specified season.

In the early 1990s, EPA, the State and, the Tribes worked together on the technical products that would serve as the basis for the PM-10 planning for the Power-Bannock Counties PM-10 nonattainment area. An emission inventory of all stationary sources and area sources in the nonattainment area was one of these technical products. For this FIP proposal, EPA started with the emission inventory for the former Power-Bannock County PM-10 nonattainment area that was developed jointly by EPA, the State, and the Tribes, which contained inventories of actual

annual emission rates, average daily emission rates, worst case emission rates for a 24-hour period, and worst case emission rates during the winter, when exceedences are most likely to occur in the area. Two types of changes to the emission inventory have been made along the way. First, although the emission inventory uses a base year of 1993, it has been revised to reflect 1996 emissions for FMC. EPA believes that the 1996 emission inventory more accurately represents current operations at FMC than any previous emission inventory prepared for the facility. For example, the 1996 emission inventory for FMC reflects additional engineering evaluation of furnace gas composition, as well as the change in the ore used by FMC, which has an effect on PM-10 emissions throughout the facility. Second, EPA has used emissions only from the stationary sources and area sources in what is now known as the Fort Hall PM-10 nonattainment area. With respect to area sources, this meant apportioning area source emissions between the Fort Hall PM-10 nonattainment area and the Portneuf Valley PM-10 nonattainment area.

Table 3 below summarizes the 1993 actual annual emissions for the Fort Hall PM-10 nonattainment area (1996 base year for FMC). Point source and area source emissions of less than one ton per year are excluded from the table. EPA used the emission inventory for the Fort Hall PM-10 nonattainment area, in

conjunction with ambient air quality and meteorological data and analysis, in reaching its determination that the continued violations of the pre-existing 24-hour PM-10 standard that have been recorded on the Tribal monitors are primarily, if not exclusively, attributable to PM-10 emissions emanating from the FMC facility within the Fort Hall PM-10 nonattainment area. In this FIP proposal, EPA estimated emission reduction targets at FMC from the estimated design value using the worst case daily emission rates at FMC. EPA believes it is appropriate to develop a control strategy assuming the potential of both adverse meteorology and worst case daily emissions occurring simultaneously in order to ensure that PM levels in the Fort Hall PM-10 nonattainment area do not endanger public health. Table 4 below summarizes the 1996 actual daily worst case emissions for FMC. EPA has used this more refined emission inventory of the individual sources of PM-10 at the FMC facility to identify the largest emission sources at the FMC facility that appear to be contributing to high PM-10 concentrations in the area.

TABLE 3

1993 Actual PM-10 Emissions Summary

Fort Hall PM-10 Nonattainment Area (greater than 1 ton/year)

Source Name	PM-10 Emissions (tons/year)
Point Sources	
FMC Corporation (1996)	727
J.K. Merrill #43 (main)	7
McNabb Grain	2
General Mills, Schiller	1
Subtotal	737
Area Sources	
Resident/Commer Const.	31
Residential Heating	0
Prescribed Burning	35
Wild Fires	49
Road Construction	12
Aircraft Emissions	1
Agricultural Equipment	1
Agricultural Windblown Dust	310
Locomotive Emissions	0
Break Wear	0
Tire Wear	0
Unpaved Roads	571
Paved Roads	59
Mobile Exhaust	0
Subtotal	1069

TABLE 4

FMC 1996 Actual Worst Case Daily and Annual PM-10 Emissions Summary

Source Name	PM-10 Emissions (lb/day)		PM-10 Emissions (ton/yr)	
POINT SOURCES				
Ground Flare	2281		197	
Calciners	1204		100	
Elevated Secondary CO Flare	828		62	
All other Baghouses	446		49	
Medusa Anderson (four furnaces)	269		43	
Calciner Cooler Vents	188		27	
Pressure Relief Vents	99		1	
Cooling Tower	96		18	
Phos Dock	34		6	
Boilers	13		2	
Emergency CO Flares	12		0	
Subtotal Point Sources	5470		505	
PROCESS and OTHER FUGITIVES				
Slag Handling				
Slag tap	173		28	
Metal Tap	88		14	
Slag cooling	209		33	
Slag digging		173	Slag handling	27
Loader to truck		270	subtotal 1045	43
Truck to slag pile		132		20
All Roads		190		25
All Piles		163		23
Dry fines material recycle		33		6

Nodule fines handling truck loading	12		2	
Nodule fines stockpiling	7		1	
Subtotal Fugitives		1450		222
Grand Total	6920		727	

As can be seen from Table 3, FMC accounts for more than 98% of PM-10 emissions from all stationary sources and more than 40% of PM-10 emissions from all sources of PM-10 in the Fort Hall PM-10 nonattainment area. Because of the size of FMC's PM-10 emissions, both in absolute terms and in comparison to other sources of PM-10 emissions in the Fort Hall PM-10 nonattainment area, EPA has invested many years and hundred of thousands of dollars in developing an accurate and comprehensive inventory of emissions from the FMC facility. Changes in the emission estimates for the FMC facility have resulted from changes in FMC processes over time, better identification of emission sources at the facility, and better understanding of emissions from known sources through source testing or further engineering analysis of known processes. Process fugitive emissions account for a significant portion of the emissions at FMC. There are approximately 450 individual fugitive emission points listed in the inventory. Because fugitive emissions do not emanate from a single point, they are difficult to measure and are determined based on assumptions and judgement. In addition, for some of the point sources at FMC, emissions cannot be measured through source tests because of the combustible nature of the gas stream, but are instead estimated based on theoretical chemical reactions and engineering calculations.

The emission inventory for FMC has undergone almost

continual revision and updating since the early 1990s. As described in more detail below, EPA initially planned on using dispersion modeling to identify specific sources subject to control and to demonstrate the effectiveness of the proposed control strategy. During this time, FMC continued to provide EPA with new information that made the inventory more complex and more detailed, but also tended to lower emission estimates. After the dispersion modeling failed to adequately perform at the Tribal monitoring sites, and EPA decided in the summer of 1997 to demonstrate the effectiveness of the proposed control strategy by rolling back overall facility emissions based on the design value, FMC came forward in December 1997 with information identifying new emission sources with significant emissions and significantly higher emission estimates for previously identified sources. This new information effectively quadrupled the daily facility-wide emission rates. EPA evaluated this new information and revised the emission inventory, where appropriate, to reflect this new information. Although EPA has, for the most part, used the emission estimates provided by FMC, EPA has in some instances revised FMC’s estimates to provide a more realistic estimate of worst case daily emissions. Please refer to the docket and TSD for a more detailed discussion of the emission inventory.

B. Determining RACM/RACT

The General Preamble describes the methodology for determining RACM/RACT in detail. 57 FR 13498, 13540-13541. In summary, EPA suggests starting to define RACM with the list of available control measures for fugitive dust, residential wood combustion, and prescribed burning contained in Appendices C1, C2, and C3 of the General Preamble and adding to this list any additional control measures proposed and documented in public comments. Any measures that apply to emission sources of PM-10 that are insignificant (i.e., de minimis) and any measures that are unreasonable for technology reasons or because of the cost of the control in the area can then be culled from the list. In addition, potential RACM may be culled from the list if a measure cannot be implemented on a schedule that would advance the date for attainment in the area. 57 FR 13498, 13540-41, 13560.

The General Preamble also provides guidance for states in determining RACT for moderate PM-10 nonattainment areas for SIP planning purposes. See 57 FR 13540-41 and Appendix C4 (57 FR 18070, 18073-74 (April 28, 1992)). EPA recommends to states that major stationary sources of PM-10 be the starting point for RACT analysis. 57 FR 13541. EPA has defined RACT for PM-10 planning purposes as the lowest emission rate that a particular source is capable of meeting by application of control technology that is reasonably available considering

technological and economic feasibility. RACT applies to existing sources of PM-10 stack, process fugitive, and fugitive dust emissions (e.g., haul roads and unpaved staging areas). See section 172(c)(1) of the Act and 57 FR 13541. RACT for a particular source is determined on a case-by-case basis considering the technological and economic feasibility of reducing emissions from that source through process changes or add-on control technology.

The technological feasibility of applying an emission reduction method to a particular source should consider the source's process and operating procedures, raw materials, physical plant layout, and any other environmental impacts such as water pollution, waste disposal, and energy requirements. The process, operating procedures, and raw materials used by a source can affect the feasibility of implementing process changes that reduce emissions and the selection of add-on control equipment. An otherwise available control technology may not be reasonable if reducing air emissions has an adverse effect on other resources and these adverse environmental impacts cannot reasonably be mitigated. 57 FR 13540-41 and 57 FR 18073-74.

Economic feasibility considers the cost of reducing emissions and the difference in these costs between the particular source and other similar sources that have

implemented emission reductions. EPA presumes that it is reasonable for similar sources to bear similar costs of emission reductions. Economic feasibility rests very little on the ability of a particular source to "afford" to reduce emissions to the level of similar sources. Less efficient sources would be rewarded by having to bear lower emission reduction costs if affordability were given high consideration. Rather, economic feasibility for RACT purposes is largely determined by evidence that other sources in a source category have in fact applied the control technology in question. The capital costs, annualized costs, and cost effectiveness of an emission reduction technology should be considered in determining its economic feasibility. The OAQPS Control Costs Manual, Fourth Edition, EPA-450/3-90-006, January 1990, describes procedures for determining these costs. The above costs should be considered for all technologically feasible emission reduction options. 57 FR 13540-41 and 57 FR 18073-74.

The attainment needs of the area should also be considered in determining RACT. Where a source contributes insignificantly to ambient concentrations that exceed the NAAQS, it would be unreasonable, and therefore would not constitute RACT, to require additional controls on the source. 57 FR 13540-13541 and fn. 18 and 20.

C. RACM/RACT Determination for Minor Stationary Sources and Area

Sources

EPA evaluated the extent to which emissions from various sources throughout the Fort Hall PM-10 nonattainment area affected attainment of the pre-existing PM-10 NAAQS as a guide to determining whether controls for those different sources is RACT. At the conclusion of that evaluation, EPA believes that emissions emanating from the FMC facility located within the Fort Hall PM-10 nonattainment area are the primary, if not sole, cause of the continued violations of the pre-existing 24-hour PM-10 NAAQS within the nonattainment area. Therefore, EPA's determination at this time is that imposing controls on PM-10 emissions from other stationary sources and area sources in the Fort Hall PM-10 nonattainment area is not necessary to protect air quality during the transition period and would not expedite attainment of the revised PM-10 NAAQS.

In this case, EPA was not able to determine on the basis of available modeling the precise contribution of other area and minor stationary sources in the Fort Hall PM-10 nonattainment area to the locations of expected 24-hour and annual PM-10 violations within the Fort Hall PM-10 nonattainment area. Despite repeated efforts, with the assistance of the Tribes, IDEQ, and affected industry, the air quality models initially selected and approved by EPA for use in the Power-Bannock Counties PM-10 nonattainment area have continued to fail well-

established performance criteria in the vicinity of the FMC facility, precisely the area where monitored violations of the pre-existing 24-hour PM-10 standard continue to occur. As discussed in more detail below in section III.I., EPA has therefore relied on simple linear proportionality between facility-wide emissions at FMC and ambient PM-10 concentrations measured at the Tribal monitors to establish that the proposed control strategy is expected to result in attainment of the PM-10 standard. The use of simple roll back assumes that each source in the area has a contribution at the monitor based only on emission rates rather than source location and emissions characteristics. The use of simple roll back in the nonattainment area therefore does not allow EPA to determine the contribution of a particular area or minor stationary source to the locations of expected 24-hour and annual PM-10 violations.

Other information, however, strongly suggests that PM-10 emissions from FMC are responsible for the high PM-10 values that have been recorded on the Tribal monitors. A simple comparison of the data among the three Tribal monitors on days when the primary site and Sho-Ban site documented exceedences of the standard strongly suggests that contributions from sources other than FMC are insignificant. Data from the background site, which is upwind from FMC based on prevailing wind directions,

reveals that the background site rarely exceeded 50 ug/m3 and generally recorded values less than 10 ug/m3 on days when the primary site and Sho-Ban site, both downwind of the FMC facility, recorded values in excess of 150 ug/m3. See Table 2.

EPA has also analyzed the PM-10 readings on the primary and Sho-Ban monitors and the wind direction observed during the sampling time frame on a more detailed level. EPA compared the 24-hour average wind direction with the PM-10 concentrations recorded at these monitors for the period between October 6, 1996, and December 31, 1997. In other words, PM-10 concentrations are presented as a function of 24-hour wind direction. Based on this data, it is evident that exceedences of the PM-10 24-hour NAAQS are recorded on the primary and Sho-Ban monitors only when the wind is blowing from the FMC calciner and furnace building areas–-two of the largest sources of PM-10 at FMC--toward the monitors. No exceedences of the PM-10 standard have been recorded on these monitors when the wind is blowing from any other direction, including from the part of the FMC facility located on State lands and from Simplot, the other potential source of PM-10 emissions containing phosphorous and which is located on State lands. EPA and the Tribes have been conducting additional air sampling and analysis at the primary and Sho-Ban monitoring sites. Filter samples from these sites are being analyzed for chemical and physical composition to

determine the types of sources contributing to the high PM-10 levels. Preliminary information from this work indicates that emissions from high temperature or combustion sources from FMC are significant contributors to the PM-10 observed on the filters and that the fine particles (PM-2.5 or less)are the major component of the PM-10. In addition, wind directional chemical analysis resulted in high levels of phosphorus ore components in the fine particles when the wind is blowing from the direction of the FMC calciners and furnace.[10]

Based on this information, the fact that PM-10 emissions from FMC are the single largest source of PM-10 emissions in the Fort Hall PM-10 nonattainment area, and the other factors discussed below in this section III.C., EPA's determination at this time is that FMC is the primary, if not the sole, contributor to PM-10 levels that exceed the pre-existing standard in the nonattainment area. EPA expects to complete the analytical and receptor-modeling study by summer of 1999. The initial results suggest the study will confirm that the sources targeted in this proposal are indeed contributing to the problem at the level the emissions inventory would indicate.

[10]Although both FMC and Simplot both utilize phosphate ore in their processes (FMC produces elemental phosphorus and Simplot produces chemical compounds (fertilizers) containing phosphorus), as discussed above, the exceedences of the PM-10 standard have been recorded on the Tribal monitors when the wind is blowing from the FMC facility toward the monitors.

1. Stationary Sources

The FMC facility is the only major stationary source of PM-10 within the Fort Hall PM-10 nonattainment area and within the entire Reservation and it emits more than 727 tons of PM-10 each year (actual emissions). There are currently five other minor stationary sources of PM-10 operating in the Fort Hall PM-10 nonattainment area, with emissions ranging from .01 to 6.8 tons per year. These minor stationary sources consist of two grain loading and storage facilities, a fertilizer handling operation, a pipeline pump station with an associated boiler, and an aggregate handling facility. PM-10 emissions from all stationary sources in the Fort Hall PM-10 nonattainment area are estimated at 737 tons per year. FMC emits 727 tons per year of this amount, or more than 98% of all emissions from stationary sources.

EPA has recommended to states in the SIP planning process that major stationary sources of PM-10 be the minimum starting point for RACT analysis. 57 FR 13541. EPA recommends that states go on to conduct a RACT analysis of minor stationary sources and require control technology for other stationary sources in the area that are reasonable to control in light of the area's attainment needs and the feasibility of such controls. Id. In light of the fact that all stationary sources within the nonattainment area other than FMC emit less than two

percent of all PM-10 emissions from stationary sources, and in light of the monitoring analysis indicating that exceedences of the standard occur only when the wind is blowing from FMC's facility toward the Tribal monitors, EPA's determination at this time is that minor stationary sources within the nonattainment area--considered individually as well as collectively–-have an insignificant impact on exceedences of the PM-10 NAAQS in the area. Therefore, EPA's determination at this time is that additional controls on minor stationary sources in the nonattainment area are not needed for attainment and would not expedite attainment. RACT for such sources would thus consist of no additional controls because it would be unreasonable to impose additional controls on these minor stationary sources in light of the attainment needs of the area. See 57 FR 13541 & n. 20.

To ensure that these and any new minor stationary sources that may locate within the nonattainment area continue to have a de minimis effect on PM-10 levels in the area that exceed the standard, EPA believes it is appropriate for these and any new stationary sources to be subject to generally applicable restrictions on PM-10 emissions. EPA has been working with the Shoshone-Bannock Tribes on air quality regulations that address the pollutants for which EPA has established NAAQS, including PM-10, and that include a new source review program. EPA

strongly encourages the Tribes to continue working toward the submission of a general air quality tribal implementation plan, including general rules for controlling PM-10 emissions from existing minor sources and a new source review program. Because these existing minor sources are relatively minor sources, EPA sees no urgency in going forward now with a minor new source review program and other general rules, but will instead await Tribal action for some reasonable period of time.

2. Area Sources

Area source emissions from within the Fort Hall PM-10 nonattainment area total approximately 1069 tons per year, or approximately 60%, of all PM-10 emissions within the Fort Hall PM-10 nonattainment area. The largest of the area source categories are paved and unpaved roads, agricultural wind blown dust, wild fires, and prescribed burning. Although area source emissions are slightly larger than the total emissions from FMC, area source emissions are spread over the entire 48.7 square miles of the Fort Hall PM-10 nonattainment area. As discussed below, the impact of area source emissions on air quality at any given location in the nonattainment area is therefore greatly reduced.

a. Roads

Emissions from paved and unpaved roads in the Fort Hall PM-10 nonattainment area are the second largest source of

particulate emissions on the Reservation, second only to FMC. Emissions from paved roads in the nonattainment area are 59 tons per year, or nine percent of all road emissions within the nonattainment area, whereas emissions from unpaved roads in the nonattainment area are 571 tons per year, or 91% of all road emissions in the nonattainment area. Combined, paved and unpaved road emissions account for 59% of all area source emissions in the Fort Hall Nonattainment area.

Emissions from paved roads have been determined by the State to have a significant ambient impact in the Portneuf Valley PM-10 nonattainment area, particularly in the Pocatello urban area, because of the high density roadway network on State lands. Most of the paved and unpaved roads within the Fort Hall PM-10 nonattainment area, however, service the rural agricultural activities that are evenly distributed throughout the Reservation. Therefore, road dust emissions are distributed over the approximately 48.7 square miles of the Fort Hall PM-10 nonattainment area. Moreover, there are few roads within the nonattainment area that are upwind of the Tribal monitors. Because of the large area over which road dust emissions are spread in the nonattainment area and the location of the roads in relation to the Tribal monitors that have recorded violations of the 24-hour PM-10 standard, EPA believes that the ambient PM-10 impact of road emissions in the Fort Hall PM-10 nonattainment

area is insignificant.

b. Wind Blown Agricultural Dust

Wind blown dust from agricultural operations is the second largest area source in the nonattainment area. Emissions from this source are estimated at 310 tons per year. These fugitive emissions result from tilling, harvesting, and exposure of tilled land to high winds. The impact of these emissions on the measured PM-10 levels at the Tribal monitors appears to be insignificant for several reasons. First, the agricultural land that is tilled and used for crops in the Fort Hall PM-10 nonattainment area is downwind of FMC and the Tribal monitors. The agricultural land upwind of the FMC facility is used primarily for cattle grazing and has vegetative cover which resists re-entrainment of windblown dust.

In addition, most of the agricultural land within the Fort Hall PM-10 nonattainment area is leased from the Shoshone-Bannock Tribes by private concerns. The Natural Resource Conservation Service in Bannock County (formerly the Soil Conservation Service) reports that most farming operations on the Reservation, like farming across the country, already utilize best management practices to control soil erosion (including wind erosion) in order to qualify for Federal subsidies under the Food Securities Act (see The Effectiveness of the 1985 Food Securities Act's Highly Erodible Land

Provisions to Reduce Agricultural Fugitive Dust Emissions, EPA 171-R-92-015, PB-92-182401, July 1992). EPA has determined that, in general, these management practices represent RACM for agricultural sources. See 57 FR 13498.

Finally, as with road emissions, agricultural emissions are spread across a wide geographic area, and thus have a reduced ambient impact. EPA therefore believes, based on available information, that agricultural emissions have an insignificant impact on the violations that have been recorded in the nonattainment area.

c. Fires

Prescribed fires and wild fires in the Fort Hall PM-10 nonattainment area emit a combined total of approximately 84 tons of PM-10 emissions each year. Emissions from these activities are usually of high intensity with smoke plumes that rise quickly into the air because of the heat generated, are of short duration (on the order of hours), and seldom if ever re-occur at the same location. Based on the experience of other areas in the country where prescribed fires and wild fires are common (such as eastern Washington and the Idaho panhandle), recording a violation of the PM-10 NAAQS at a fixed location due to fire is rare. In addition, there have been no reports or evidence of wild or prescribed fires directly upwind of the Sho-Ban or primary monitors or directly upwind of the background

monitor. In short, emissions from fires do not appear to have contributed to the violations of the PM-10 NAAQS recorded in the nonattainment area. For these reasons, EPA's determination at this time is that prescribed and wild fires have an insignificant impact on the continued violations of the pre-existing 24-hour PM-10 standard that have been recorded on the Tribal monitors.

D. Overview of FMC Operations

The FMC facility located on the Fort Hall Indian Reservation near Pocatello, Idaho, produces "food grade" elemental phosphorus from shale (or ore) mined in the general area. Elemental phosphorus is then shipped to other FMC processing facilities throughout the United States where it is converted into phosphates and phosphoric acid, which in turn are used in a wide variety of household products from dishwasher soap to additives to soft drinks. At the FMC facility near Pocatello, crushed phosphate ore is pressed into briquettes and heated (calcined) to remove organic matter. These calcined briquettes, now called nodules, are mixed with silica and dried coke (this mix is called burden) and fed to the four electric arc furnaces in a continuous operation. In a reducing atmosphere in the plasma of the electric arc furnace, elemental phosphorus is liberated as a gas.

Furnace gases are ducted to an electrostatic precipitator

to clean the gas stream and then to condensers where the phosphorus is cooled, liquified, and collected for transport. Molten slag (calcium silicate), a waste product, is formed at the bottom of the furnace and must be periodically removed through a process called “slag tapping”. Ferrophos, a metal byproduct, also forms in the bottom of the furnace below the slag layer and must also be periodically removed through a process called “metal tapping”. Potential particulate emission points include handling of raw ore, nodules, slag, and burden. Particulates are also emitted during the calcining of briquettes, and from various furnace flares and vents.

For ease of reference, EPA has assigned a number to each of the known sources of PM-10 at FMC. The numbering system is consistent throughout this notice.

E. General Process for Determining RACT for FMC

1. In General

The process for determining RACT in states with moderate PM-10 nonattainment areas is discussed above in section III.B. above. Where, as here, EPA is exercising its discretionary authority under sections 301(a) and 301(d)(4) of the Act and 40 CFR 49.11(a) to promulgate a FIP for a moderate PM-10 nonattainment area in Indian country as necessary or appropriate to assure protection of healthy air quality, EPA believes it is appropriate for EPA to use this same RACT methodology in

developing the control strategy.

EPA hired Environmental Quality Management, Inc. (EQM), a contractor with extensive knowledge of the phosphorus industry in general and experience with the FMC Pocatello facility in particular, to assist in the development of a comprehensive and accurate particulate emission inventory for FMC. The emission inventory identified the point and fugitive sources of PM-10 at FMC, the emission rate for each source, and all existing control devices operating on each source.

EQM then conducted an evaluation of alternative control technologies for each source that could be used as the basis for a determination of RACT. For each source, EQM identified the existing control technology for the source and alternative control technologies[11] that could be more effective in reducing emissions than the existing control technology used at FMC. EQM then evaluated these alternative control technologies, including the incremental emission reductions and estimated cost of installing, operating, and maintaining these control technologies. EQM also determined the "cost effectiveness" ($/ton of PM-10 reductions) of the alternative control technologies.

Based on the EQM report, EPA considered whether each

[11]The term "control technologies" as used here includes process changes that would result in a reduction of emissions.

alternative control technology represented RACT, that is, whether the technology was both technologically and economically feasible in light of the attainment needs of the area. After selecting the control technology that represented RACT for each source, EPA developed enforceable emission limitations and work practice requirements that represent the lowest emission limitation the source is capable of achieving with the selected control technology.[12]

For five sources at FMC--slag handling and related processes (source 8), the calciner scrubbers (source 9), the furnace building (source 18c), fugitive and point source emissions from the phosphorous loading dock (source 21), and the elevated secondary condenser and ground flares (source 26a)--EPA believes that additional controls are both technologically and economically feasible and necessary in light of the attainment needs of the area. Collectively, slag handling, the calciner scrubbers, and the elevated secondary condenser and ground flares account for more than 77% of daily worst case PM-10 emissions from all sources at FMC. The control strategy proposed in this FIP is anticipated to result in a reduction of

[12]The Clean Air Act defines the term "emission limitation" as "a requirement established by the state or the Administrator which limits the quantity, rate, or concentration of emissions of air pollution on a continuous basis, including any requirement relating to the operation or maintenance of a source to assure continuous emission reduction, and any design, equipment, work practice or operational standard." CAA section 301(k).

PM-10 emissions of 4756 pounds per day from these sources, a 69% facility-wide reduction of PM-10 emissions from current levels in the emission inventory. The phos dock and the furnace building will be reduced to the levels of emissions in the emission inventory. The RACT determination for these five sources is discussed in more detail below.

EPA believes that all remaining sources at FMC currently employ controls that represent RACT. For example, most of the point sources at FMC are controlled by baghouses or scrubbers. Baghouses and scrubbers are, in general, among the most effective control technologies available for controlling PM-10 emissions from point sources and therefore generally represent RACT. With respect to fugitive sources, the available alternative control technologies are, in general, very expensive, such as building an enclosure around the fugitive source. Many of the fugitive sources, individually, have low emissions, which results in a high cost effectiveness for the alternative control technologies. In addition, further PM-10 reductions from many of these smaller sources do not appear to be necessary in light of the attainment needs of the area and would not expedite attainment.

As discussed above, however, none of the sources at FMC are currently subject to federally-enforceable emission limitations or work practice requirements on PM-10 emissions. For those

sources which EPA believes currently employ RACT-level controls, EPA is proposing emission limitations and work practice requirements designed to maintain PM-10 emissions from those sources at the current levels in the emission inventory. This is essential because, as discussed in more detail below, the proposed control strategy will result in attainment of the pre-existing 24-hour PM-10 standard only if PM-10 emissions from these other sources remain at the current levels in the emission inventory. Please refer to the TSD for a detailed analysis of the existing and alternative control technologies, an evaluation of the available alternatives, and emission limitations and work practice requirements that EPA believes represent the lowest emission limitation that each source is capable of achieving by the application of the RACT-level controls for each source that EPA believes currently employs RACT-level controls.

2. RCRA Consent Decree

On October 16, 1998, a consent decree between FMC and EPA was lodged in the United States District Court for the District of Idaho regarding alleged violations of the Resource Conservation and Recovery Act (RCRA) at the FMC facility. The public comment period on the RCRA consent decree closed on December 18, 1998. If, after reviewing the comments received, EPA and the Department of Justice determine that it is appropriate to proceed with entry of the RCRA consent decree,

the Department will file a motion for entry of the decree.[13] Upon entry of the RCRA consent decree by the court, the RCRA consent decree will require FMC to pay a civil penalty of $11,864,800 for alleged RCRA violations and to bring the FMC facility into compliance with RCRA. In addition, as part of the settlement, FMC agreed to implement 13 "supplemental environmental projects" (referred to as SEPs) in order to reduce PM-10 emissions at the FMC facility. Altogether, these SEPs will require FMC to expend more than $64 million in capital costs to implement these PM-10 reduction projects.[14]

Five of the SEPs address PM-10 emissions from the five sources for which EPA believes additional RACT controls are necessary for attainment of the PM-10 NAAQS. For each of these five sources, as is discussed in more detail below, FMC has agreed to install and operate as SEPs the control technology EPA believes represents RACT. FMC's commitment to install and operate this control technology for five years is persuasive evidence that the identified control technology is both technologically and economically feasible. Because of FMC's

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[13]The Department of Justice reserves the right to withdraw or withhold its consent to entry of the proposed consent decree if the comments, view, and allegations concerning the consent decree disclose facts or considerations which indicate that the proposed decree is inappropriate. 50 CFR 50.7(b).

[14] FMC has also agreed to commit $1,650,000 to fund a study of the potential health effects on residents of the Fort Hall Indian Reservation that may have resulted from releases of hazardous substances at the FMC facility.

agreement to implement the control technology for these sources as SEPs in the RCRA consent decree, EPA believes that the controls will be in place at least two years before the controls would have been in place without FMC's agreement to install the necessary controls as SEPs. The acceleration of the compliance date is discussed in more detail in section III.H. below.

FMC has also agreed to implement as SEPs eight other projects designed to modernize and upgrade control systems at the FMC facility which will make it easier to keep existing control technology operating properly without upsets and breakdowns, thereby reducing PM-10 emissions at the FMC facility. For example, FMC has agreed to replace at least three existing baghouses with larger, more efficient baghouses and to spend more than $5.5 million for the upgrading or replacement of other existing baghouses. FMC has also agreed to upgrade and improve other PM-10 processes and controls. For these other projects, that is, other than the five projects for sources for which EPA believes additional controls are necessary to meet the RACT requirements, EPA believes that FMC can achieve the proposed emission limitations and work practice requirements even without the SEPs. The SEPs provide additional assurance, however, that FMC will be able to comply with the requirements of this proposed FIP. A copy of the RCRA consent decree is in the docket.

3. Mass Emission Limitations

EPA has proposed a mass emission limitation for most identified point sources. For sources for which EPA has determined that additional controls are not necessary for attainment of the PM-10 NAAQS, the proposed mass emission limitation is based on the daily maximum emission estimate for the source in the 1996 emission inventory. EPA believes that compliance with the proposed mass emission limitations will, except for the point sources discussed below, entail no new or additional control equipment and no or minor changes in practices, procedures, or processes.

As discussed in more detail in section III.F. below, for three point sources--the calciner scrubbers (source 9), the phos dock Andersen scrubber (source 21a), and the elevated secondary condenser and ground flares (source 26)--EPA believes that additional controls are technologically and economically feasible and needed for attainment of the PM-10 standard. For these sources, the proposed mass emission limitation is in general based on the daily maximum emission estimate for the source in the 1996 emission inventory, but this emission rate is then reduced by the estimated percentage reduction in emissions that is expected after application of the control technology identified as RACT-level controls.

EPA is not proposing mass emission limits for fugitive

sources because, in general, there are no readily available test methods to determine compliance with mass emission limits for fugitive sources. Instead, EPA is proposing visible emission limitations for fugitive sources as an indication that emission capture and control equipment is designed and operating properly and that proper housekeeping and maintenance activities are being conducted to prevent the escape of fugitive emissions. EPA is also proposing work practice requirements for fugitive sources, which are discussed in more detail below.

4. Opacity Limits

EPA is proposing a specific opacity limit for all but one of the known point and fugitive sources at FMC. EPA is also proposing a limit of no visible emissions from any location at the FMC facility, except to the extent a specific opacity limit is established for an identified point or fugitive emission source, in order to ensure that sources inadvertently omitted from the emission inventory do not go unregulated.

The opacity limits proposed in this FIP are based on best engineering judgment, as explained in more detail below and in the technical support document. EPA is relying in part on surveys of visible emissions conducted at the FMC facility to verify conditions used in the determination of emissions estimates and to determine whether the sources could comply with the proposed opacity limits. At EPA’s request, air quality

inspectors from the Shoshone-Bannock Tribes, State of Idaho, and EPA, who are certified readers using EPA Method 9, conducted visible emissions observations of most of the point and fugitive emission sources at FMC in December 1995 and January 1996 (1995-1996 visible emissions survey) and again in October and November 1998 (1998 visible emissions survey). The surveys are collectively referred to as the "visible emissions surveys". In general, the inspectors documented no visible emissions during the period of observation and rarely documented visible emissions greater than five percent opacity. Several of the sources for which visible emissions greater than five percent were observed are among the five sources for which EPA believes additional controls are necessary or sources that EPA believes were not being properly maintained or operated at the time of the inspection. In addition to the visible emissions surveys, EPA has considered opacity limits that apply to similar sources.

In summary, EPA believes that the visible emissions surveys and review of other similar sources support EPA's conclusion that the proposed opacity limits are both technologically and economically feasible because FMC appears to be capable of meeting the limits on a daily basis.[15] The demonstration of the effectiveness of this proposed control strategy is premised on

[15]The results of the visible emissions surveys are discussed in more detail in the in-depth RACT discussion of the sources for which EPA believes additional controls are necessary and, for all other sources, in the TSD in the docket.

ensuring that, for those sources for which EPA does not believe additional controls are necessary, emissions from those sources remain at the current levels in the emission inventory. EPA therefore believes that the proposed opacity standards are also necessary because they are designed to keep PM-10 emissions at the current levels in the emission inventory.

a. Point Sources

Many of the point sources at FMC are currently controlled by baghouses and scrubbers. In general, EPA has proposed an opacity limit of seven percent for point sources (i.e., stacks) controlled by baghouses and five percent for point sources controlled by scrubbers. Based on best engineering judgement and field experience, EPA believes that point sources controlled by baghouses or scrubbers should have zero visible emissions if the control equipment is properly designed, maintained, and operated. A limit of five percent or seven percent provides for an appropriate margin of error. EPA is proposing Method 9 (40 CFR part 60, appendix A) as the reference test method. The 1995-1996 and 1998 visible emissions surveys confirm that the baghouses and scrubbers at FMC, when operating properly, had no visible emissions.

EPA is proposing a seven percent opacity limit for point sources controlled by baghouses at FMC. All of these sources involve processes and raw materials similar to processes and raw

materials used by facilities subject to New Source Performance Standard (NSPS) subpart 000. See 40 CFR part 60, subpart 000. This standard applies to nonmetallic mineral processing plants processing crushed and broken stone, including shale, sand and gravel, and other similar materials. 40 CFR 60.670 and 60.671. Under this standard, stack emissions are subject to an opacity limit of seven percent unless the emissions are controlled by a wet scrubber. 40 CFR 60.672(a)(2). EPA believes that the point sources controlled by baghouses at FMC that capture emissions from shale, briquette, and nodule handling are sufficiently similar to the processes subject to the seven percent opacity limit of NSPS subpart 000 as to provide a basis for proposing a seven percent limit for the following point sources: east shale baghouse (source 5a); middle shale baghouse (source 6a); west shale baghouse (source 7a); north nodule discharge baghouse (source 12a); south nodule discharge baghouse (source 12b); east nodule baghouse (source 15a); west nodule baghouse (source 15b); nodule reclaim baghouse (source 16a); dust silo baghouse (source 17a); the east and west baghouses in the furnace building (sources 18a and 18b); and the coke handling baghouse (source 20a).

For point sources at FMC controlled by scrubbers, EPA is proposing an opacity limit of five percent. As stated above, EPA believes that point sources controlled by scrubbers should

have zero opacity if they are being properly operated and maintained. A five percent opacity limit is commonly seen for point sources controlled by scrubbers. EPA proposes the five percent opacity limit for the following sources controlled by scrubbers: phos dock Andersen scrubber (source 21a)and excess CO burner (source 26b). Although the calciners are also controlled by scrubbers, EPA is proposing that the calciners be exempt from an opacity limit, as discussed in more detail in section III.F.2.c. below.

EPA is also proposing a five percent opacity limit for the boilers (source 23). Because the boilers are fired on natural gas, EPA believes that the boilers should have zero visible emissions if they are properly designed, maintained, and operated.

EPA has proposed an opacity limit of no visible emissions for the pressure relief vents (source 24) except during a "pressure release," as defined in the proposed FIP. The pressure release vents at FMC are a safety device for the furnace system to prevent excessive pressure and potential explosion in the furnaces. They are designed to open and release excess furnace gasses directly to the atmosphere under certain conditions so as to reduce the potential for explosions.

EPA believes that the pressure release vents, when not venting furnace gasses (i.e., when not experiencing a pressure

release), should have no visible emissions if properly maintained and operated. EPA therefore is proposing a prohibition on visible emissions except during a pressure release. To ensure that the pressure release vents are not used as regular uncontrolled emission points and to ensure they are properly maintained and operated, EPA is proposing several work practice and monitoring requirements for the pressure release vents, which are discussed in more detail in section III.E.5. below.

The furnace CO emergency flares (source 25) are also a safety feature. When the furnace is shut down, due to an emergency, scheduled power outage, or scheduled maintenance, it is necessary to flare the furnace gases directly to the atmosphere until they can be safely routed to the furnace scrubbing system. Like the pressure release vents, when not venting furnace gasses, the furnace CO emergency flares should have no visible emissions if properly maintained and operated. EPA therefore is proposing a prohibition on visible emissions during normal operating conditions. To account for the need to vent furnace gases directly to the atmosphere under certain conditions, EPA proposes that this limit not apply during an “emergency”. To ensure that venting of the CO emergency flares is minimized, EPA is proposing definitions for an emergency, along with recordkeeping and reporting requirements, which are

discussed in more detail below in section III.G.

The proposed opacity limitations for the point sources for which EPA believes additional controls are necessary for attainment are discussed in section III.F. below.

b. Fugitive Emission Sources

EPA is proposing a limit of no visible emissions from most storage piles that consist of materials with a high moisture content. For example, the main shale pile (source 2) and the emergency/contingency raw ore shale pile (source 3) are comprised of material with a very high moisture content from which no visible emissions should be expected. EPA has also proposed a limit of no visible emissions from rail car unloading (source 1) and the stacker and reclaimer (source 4), again, because the raw ore as received from the mine has a very high moisture content.

EPA is also proposing a limit of no visible fugitive emissions from all buildings, with the exception of the furnace building, which is discussed in more detail in section III.F.5. below. NSPS subpart 000, which applies to facilities using similar processes and raw materials as those used at FMC, imposes a limit of no visible fugitive emissions from any building enclosing any process subject to NSPS subpart 000, except through a vent, which is a point source subject to the seven percent opacity limit under NSPS subpart 000. See 40 CFR

60.672(e). In general, buildings should be sealed and sources contained within them under a negative pressure created by the dust control systems for the sources located therein.

EPA is also proposing an opacity limit of no visible fugitive emissions from the dust silo and the pneumatic dust transport system (source 17b). Dust collected in the various baghouses at FMC is pneumatically transported from each baghouse to the dust silo via a pneumatic transport system. The dust silo and pneumatic transport system are enclosed systems and, when properly operated and maintained, should have no leaks to the atmosphere. Leaks in ducts can occur due to abrasion, wear and tear, and poor maintenance. These conditions represent poor operations and maintenance and can be prevented. Any visible emission is indicative of a leak that needs repair.

EPA is proposing an opacity limit of ten percent for all other fugitive sources identified in Table A. The ten percent limit applies to uncaptured fugitive emissions and process fugitive emissions from sources controlled by scrubbers and baghouses, including fugitive emissions that are not in fact captured by the control device. A properly designed and operating hood and capture system should be able to capture almost all particulate and ensure no visible emissions. A ten percent opacity will allow for rare situations when conditions overwhelm the emission capture system. NSPS subpart 000

establishes a ten percent opacity limit on most fugitive emissions. See 40 CFR 60.672(b).

The proposed ten percent opacity limit also applies to the nodule pile (source 11), the nodule fines pile (source 13), and the screened shale fines pile (source 14) which contain material a portion of which consists of fine dust materials and is subject to entrainment by wind during the addition of material to the piles. These piles are therefore are more likely to experience periods of visible fugitive emissions. For similar reasons, EPA proposes that roads be subject to an opacity limit of ten percent.

The proposed opacity limitations for the fugitive sources for which EPA believes additional controls are necessary for attainment--slag handling and related processes (source 8), the furnace building (source 18c), and phos dock fugitives (source 21b)–-are discussed in section III.F. below.

5. Work Practice Requirements

EPA is proposing a general requirement that FMC maintain and operate each source, including all associated pollution control equipment, in a manner consistent with good air pollution control practices for minimizing emissions. This requirement is based on a general provision in the New Source Performance Standards (NSPS), 40 CFR 60.11(d). Many States have comparable provisions in their SIPs or include such a provision

in new source construction permits. See Washington Administrative Code (WAC) 173-405-040(10); WAC 173-410-040(4); WAC 173-415-030(6)). EPA believes that control equipment and processes should at all times be operated in a manner consistent with good air pollution control practice for minimizing emissions. Determinations of whether acceptable operating and maintenance procedures are being used will be based on all information available to EPA, including, but not limited to, monitoring results, opacity observations, review of operating and maintenance procedures and inspections.

EPA is also proposing a moisture content and latex application requirement for the main shale pile (source 2) and the emergency/contingency raw ore shale pile (source 3). This requirement is designed to ensure PM-10 emissions from these sources remain at current levels. In addition, according to FMC, FMC already applies latex to these piles to reduce fugitive emissions.

As discussed above, the pressure relief vents (source 24) are not subject to an opacity limit during a pressure release. Because EPA is proposing that the opacity limit does not apply to the pressure relief vents during a “pressure release”, it is essential to know the frequency and duration of a pressure release in order to implement the proposed opacity standard. In addition, in order to minimize PM-10 emissions from this source,

it is essential that the duration and frequency of pressure releases are minimized to the extent possible. EPA therefore proposes to require FMC to install continuous temperature indicators and recorders to detect when a pressure release from a furnace begins and ends on each of the pressure release vents. The installation of temperature indicators and recorders on each pressure relief vent should detect all pressure releases and indicate their duration because the expected temperature during a pressure release should be significantly above ambient temperatures. Similar monitoring devices are being used to monitor the venting of uncontrolled emissions of noncondensible gases from pressure relief devices on digesters at pulp mills in Washington State.

EPA proposes to require that FMC submit a proposed parameter range of operation for the pressure relief vents that would indicate when a pressure release is occurring. The parameters would be approved through the title V permit issuance process or as a modification to FMC's title V permit. Until that time, the parameter range proposed by FMC for the pressure relief vent devices would serve to define when a "pressure release" is occurring.

After a pressure release, the seal must be re-established. Poor maintenance of the pressure relief vents and valves can lead to a delay in re-establishing the seal, which can result in

excessive visible emissions. EPA has proposed as a work practice standard and monitoring requirement that FMC be required to conduct a visible emissions observation of each pressure relief vent after the seal has been re-established or otherwise sealed after each pressure release. The requirement to ensure that a pressure relief vent is properly resealed after a release is well established in the various leak monitoring rules in the NSPS and the National Emission Standards for Hazardous Air Pollutants (NESHAPS). See, e.g., 40 CFR 60.482-4 (requiring that pressure relief devices be returned to state of no detectable emissions); 40 CFR 61.648 (same).

Finally, because the pressure relief vents at FMC are designed to release at 18 inches of water, EPA also proposes to require that FMC maintain the release point on each pressure relief vent at a minimum of 18 inches of water and to inspect each pressure relief valve after the seal has been re-established or otherwise sealed after each pressure release to ensure 18 inches of water is maintained. This will ensure that the pressure required to cause a release to the atmosphere is not reduced below the 18 inches of water setting, thereby preventing unnecessary releases to the atmosphere.

The 1995-1996 visible emissions survey did document several occasions when the pressure relief vents were emitting visible emissions. In one case the pressure relief valve was open and

furnace gasses were being emitted. In a second case emissions were occurring even though the pressure relief valve was sealed. In accordance with the RCRA consent decree, FMC has replaced the existing pressure relief valves with an improved design that will quickly re-establish the seal. EPA believes that the new pressure relief valves should be able to comply with a requirement of no visible emissions from the pressure relief vents.

Additional work practice requirements are discussed in conjunction with the discussion of monitoring in section III.G. below.

6. Reference Test Methods

EPA has promulgated Methods 201/201A and 202 (40 CFR part 51, appendix M, "Recommended Test Methods for State Implementation Plans") as the reference test methods for mass PM-10 emission limitations for point sources and recommends that states use these reference test methods for PM-10 emission limitations in SIPs. Method 201 or its alternative, 201A, are used to measure primary PM-10 at stack conditions. Method 202 is used to measure matter that will condense to PM-10 at ambient temperatures but which is a gas at stack conditions.

In general, EPA proposes that both Methods 201 or 201A and Method 202 be required as the general reference test methods for the proposed mass emission limitations for point sources at FMC.

EPA has proposed several exceptions to this requirement. First, FMC must use Method 5 (40 CFR part 60, appendix A) in place of Method 201 or 201A for the calciners (source 9) and any other sources with entrained water drops. In such case, all the particulate matter measured by Method 5 must be counted as PM-10 because Method 5 is a test method for determining total suspended particulate from a stationary source, not just PM-10. Second, FMC may use Method 5 as an alternative to Method 201 or 201A for a particular point source. Again, if Method 5 is used, all of the particulate measured by Method 5 must be counted as PM-10. Finally, FMC is not be required to use Method 202 for a particular point source if FMC submits a written request to the Regional Administrator which demonstrates that the contribution of condensible particulate matter to total PM-10 emissions is insignificant for such point source and the Regional Administrator approves the request in writing.

For opacity standards, EPA is proposing EPA Method 9 (40 CFR part 60, appendix A) as the reference test method for opacity standards with numerical limits for both point sources and fugitive sources, with an averaging period of six minutes and an observation interval of 15 seconds.

For those sources at FMC for which EPA is proposing a limit of no visible emissions, EPA is proposing a “visual observation” as the reference test method. The standard of no visible

emissions means that at no time during the observation period shall the source emit any visible emissions. A "visual observation" is defined to mean that no visible emissions are detected during 10 minutes of continuous viewing conducted in accordance with section 5 of EPA Method 22 (40 CFR part 60, appendix A) by a person who meets the training guidelines described in section 1 of Method 22.

The proposed FIP clarifies that the specification of a reference test method does not preclude the use of other credible evidence for the purpose of submitting compliance certifications or establishing whether or not FMC is in compliance with a particular requirement. This is consistent with recent amendments to the requirements for SIPs, 40 CFR 51.212(c) and 52.12(c), and recent amendments to the NSPS and NESHAPs, 40 CFR 60.11(g) and 61.12(e). See 62 FR 8314 (February 24, 1997).

7. Startup, Shutdown, Scheduled Maintenance, Upsets, Breakdowns, Malfunctions, and Emergencies

EPA has carefully considered whether to provide an affirmative defense to a penalty action for violation of the proposed emission limitations occurring during periods of startup, shutdown, scheduled maintenance, upset, breakdown, malfunction, or emergency. Because the emission limitations proposed in this FIP are designed to attain and maintain the

applicable health-based PM NAAQS, any affirmative defense to a penalty for exceeding the standards proposed in this notice must not interfere with EPA's responsibility for assuring such attainment and maintenance.

After careful consideration of the issue, EPA is proposing two alternative approaches with respect to violations attributable to such events. Under the first approach, the proposed emission limitations would apply at all times and there would be no affirmative defense for excess emissions caused by such events. If emissions exceeded the proposed standards during startup, shutdown, scheduled maintenance, a malfunction, or an emergency, EPA would, of course, retain its enforcement discretion to forgo seeking a civil penalty for violation of the standard. For example, EPA could determine not to pursue a penalty action because excess emissions occurred during a particular sudden and unavoidable breakdown of process or control equipment beyond FMC's control, such event could not have been prevented through better planning, design, operation, or maintenance, and FMC made repairs in an expeditious fashion and took steps to minimize the excess emissions to the extent practicable.

Under the second approach, EPA would provide an affirmative defense to a penalty action (but not to an action for injunctive relief) provided certain conditions are satisfied. Under this

second approach, EPA is proposing somewhat different conditions that must be satisfied for startup, shutdown, and scheduled maintenance, on the one hand, and upsets, breakdowns, malfunctions, and emergencies (collectively referred to here as "malfunctions or emergencies"), on the other hand. Startup, shutdown, and scheduled maintenance[16] are generally foreseen or planned events and should be accounted for in the planning, design, and implementation of operating procedures for the process and control equipment. In contrast, malfunctions and emergencies are, by definition, unplanned or unforseen events.

Under this second approach, for FMC to obtain relief from penalty for violations resulting from startup, shutdown, or scheduled maintenance, FMC would be required to notify EPA of any startup, shutdown, or scheduled maintenance event expected to cause emissions in excess of the generally applicable standards prior to the occurrence of such event. FMC would also be required to establish, through properly signed, contemporaneous operating logs or other relevant evidence, that the excess emissions could not have been avoided through careful and prudent planning, design, and operations and maintenance practices; that the emission unit in question and any related control equipment and processes were at all times maintained and

[16]A shutdown or startup necessitated by a malfunction or emergency would be treated as any other malfunction or emergency.

operated in a manner consistent with good practice for minimizing emissions; that the amount and duration of the excess emissions were minimized to the maximum extent practicable; and that all reasonable steps were taken to minimize the impact of the excess emissions on the ambient air. FMC would also be required to file reports of emissions in excess of the generally applicable standard within 48 hours of occurrence. To ensure protection of the PM-10 NAAQS, the affirmative defense would not apply on any day on which an exceedence of the revised PM-10 NAAQS was recorded on any monitor in the Fort Hall PM-10 nonattainment area. In addition, the affirmative defense would only be available in a penalty action. In order to protect the PM-10 NAAQS, the affirmative defense would not be available in an action seeking injunctive relief.

With respect to the affirmative defense for malfunctions and emergencies under the second approach, EPA is proposing an affirmative defense based on the affirmative defense for "emergencies" under the title V air operating permit program. See 40 CFR 70.6(g) and 71.6(g).[17] An "emergency" is defined as any situation arising from sudden and reasonably unforeseeable

[17]Although EPA has proposed to delete the emergency defense from the title V program, see 60 FR 45530, 45559-60 (August 31, 1995), the basis for the proposed deletion was that the title V program should not be used as a vehicle to revise underlying applicable requirements. There was no suggestion that the elements of the affirmative defense set forth in the title V rules were in anyway insufficient or improper.

events beyond the control of the source, including acts of God, which situation requires immediate corrective action to restore normal operation, where the increase in emissions are unavoidable. An emergency would not include noncompliance to the extent caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation or operator error. See 40 CFR 70.6(g)(1) and 71.6(g)(2). In claiming an emergency, FMC would be required to establish, through properly signed, contemporaneous operating logs or other relevant evidence, that an "emergency" occurred and that FMC can identify the cause, the facility was being properly operated at the time, FMC took all reasonable steps to minimize levels of emissions that exceeded the standard, and that FMC notifies EPA within 48 hours of occurrence. Again, to ensure protection of the PM-10 NAAQS, the affirmative defense would not apply on any day on which an exceedence of the revised PM-10 NAAQS was recorded on any monitor in the Fort Hall PM-10 nonattainment area. In addition, the affirmative defense for emergencies would also only be available in a penalty action. In order to protect the PM-10 NAAQS, the affirmative defense would not be available in an action seeking injunctive relief. EPA specifically requests comment on whether to provide an affirmative defense to a penalty action for excess emissions due to startup, shutdown, scheduled maintenance, or emergency.

F. RACT Determination for Sources for Which EPA believes Additional Controls Are Required for RACT

1. Slag Handling Sources (Source 8)

a. Overview of Current Operations

Slag handling, from the furnace to final storage in the slag pile, is a major source of primary particulate at FMC. The alternative control technologies that are currently being used in the phosphorus industry and industries with similar processes today would reduce or eliminate PM-10 emissions from several separate and distinct emission sources at FMC, as discussed below. Therefore, EPA evaluated RACT for these several slag handling sources as a single source.

Slag Pit, Tap Hoods, and Sump Vents

Slag is a waste byproduct generated within the furnace, which must be periodically removed. This process is called “slag tapping” and entails the furnace operator removing a plug from the furnace wall which in turn allows molten slag to flow out of the furnace into slag runners. Slag runners direct the molten slag out of the furnace building into an area behind the furnace building called the slag pits. Each furnace has two tap holes, runners, and pits. Each furnace is tapped for approximately 20 minutes each hour. In FMC’s current operations, hot molten slag flows through slag runners from the furnaces along troughs in the furnace building floor to the slag pits located outside the

furnace building. The slag is then cooled by exposure to the outside ambient air and application of water sprays. The water sprays (quench water) also serve to crack the cooling mass to aid in digging. “Hot slag”, which has cooled significantly but is still at a temperature well above the outside ambient temperature, is dug by front-end loaders from each pit and loaded into trucks for transport to the slag pile. Digging and loading of slag occurs daily. After the slag is removed, the pit is lined with crushed slag from the recycle material pile as protection from the molten slag, to create a berm to contain the slag, and to aid in digging.

Fugitive emissions of PM-10 are emitted at several points in the process described above: from the tap hoods inside the furnace building; from the cooling slag in the slag pits; when the slag is dug by front-end loaders; and when the slag is dumped into trucks. In addition, emissions occur when recycle material (crushed slag) is loaded back into trucks and then dumped back into the slag pit to line the pits. Emissions from these sources account for 784 pounds of PM-10 each day and 143 tons per year.

Dump to Slag Pile

After slag has been loaded into trucks, it is hauled from the slag pit area to the final slag storage pile where it is dumped. The slag, although already broken up in the digging and

loading process, is still fracturing from continued cooling. Significant fugitive PM-10 emissions occur when the slag is dumped from the trucks to the slag pile. EPA estimates that this process accounts for an additional 135 pounds per day and 20 tons per year of PM-10.

Recycle Material Pile

A portion of the slag, approximately one third, is recycled by sending it off site, where it is crushed, returned to FMC, and stored in a pile. The crushed slag is used to line the slag pit after the molten slag has been removed and hauled to the slag pile in order to create a berm to contain the molten slag and to aid in digging. EPA estimates PM-10 emissions from the recycle material pile to be negligible.

Total Emissions from Slag Handling Sources

EPA estimates the total combined PM-10 emissions from the handling of slag at FMC at 1045 pounds per day and 165 tons per year. Slag handling emissions account for 16% of FMC's total facility-wide daily emissions. The 1996 emissions from each slag handling source are outlined below:

Cooling slag	209 pounds/day; 33 tons/year
Digging slag	173 pounds/day; 27 tons/year
Loading slag into truck	270 pounds/day; 43 tons/year
Truck to slag pile	132 pounds/day; 20 tons/year

Slag tapping	173 pounds/day; 28 tons/year
Metal tapping	88 pounds/day; 14 tons/year
Total slag emissions	1045 pounds/day; 165 tons/year

b. Evaluation of Alternative Control Technology

There are two currently available alternative control technologies for slag handling. “Slag granulation” was used by a thermal process elemental phosphorous plant that ceased operation in late 1995. “Hot pour pot handling” is used at the only other thermal process elemental phosphorus plant in the United States that remains in operation. Ten other elemental phosphorus facilities were previously operated in the United States and Canada, but have not been in operation for many years. EPA does not believe it is appropriate to consider the technology used by old, non-operational, and presumably obsolete, facilities in determining RACT. EPA therefore considered only the alternative control technologies employed by the other elemental phosphorous facility that remains in operation and the facility that recently ceased operation at the end of 1995.

Application of either slag granulation or hot pour pot handling would significantly reduce PM-10 emissions at almost all slag handling sources throughout the FMC facility, including

slag tapping, ferrophos tapping, slag cooling, quench water, slag digging, slag dumping to slag pile, slag crushing, and lining the slag pits.

Slag Granulation

With slag granulation, molten slag flows down slag runners (troughs in the furnace floor) from the furnace to a concrete launder just outside the furnace building, where the slag flows into a high pressure and high volume water jet that instantly cools and solidifies the slag into sand-like granules. The slag is then de-watered and transported by conveyor belt to a small storage pile. The granulated slag is then loaded into trucks for transport to the slag pile.

EPA evaluated the slag granulation system at a facility near Butte, Montana, that ceased operations in 1995. Fugitive tap hood emissions from slag tapping would not be reduced through the implementation of slag granulation because the existing slag runners, capture hoods and control devices within the furnace building would remain. However, PM-10 emissions from the launder to final storage on the slag pile would be eliminated because of the large size and high moisture content of the granules. PM-10 emissions from slag cooling, digging, loading, crushing, lining the pits, and dumping to the slag pile would also be eliminated if the granulation process is used. EPA estimates the reductions from implementation of this

technology could be on the order of 90% of current emissions from this source at FMC (or 946 pounds per day) if the granulation process is continuously operated.

There are significant engineering problems, however, with the slag granulation technology. During slag tapping, it is impossible to identify when ferrophos metal begins to flow out of the furnace. When this metal comes into contact with water, a violent explosion occurs. Although a system could potentially be designed to reduce the likelihood of explosion, the potential for explosion would always be present. FMC has verbally advised EPA of its concerns regarding the safety of the granulation system and explosions from ferrophos coming into contact with water.

In addition, during periods of extreme cold, like that experienced in Idaho and Montana, the conveyor belt that transports the slag granules from the de-watering process to the storage pile can freeze. It is therefore unlikely that, if the granulation system is implemented at FMC, 100% of all the slag will be processed using the granulation system. The facility that used this technology until recently estimated that only 50% of its slag was processed by granulation. If this system were to be used at the FMC facility, the slag granulation system might not be functional during the winter and FMC would need to revert to the pit system, which would not result in the

anticipated reductions in emissions during the winter. This is a significant concern because both the highest PM-10 concentrations and the most frequent violations of the pre-existing 24-hour PM-10 standard have generally been recorded on the Tribal monitors during winter.

EPA estimates that slag granulation, if implemented at FMC, would be able to reduce emissions on an annual basis by 85 tons per year. However, worst case daily emissions would not be reduced at all during the winter. Therefore, EPA does not consider slag granulation to be an appropriate control measure for ensuring attainment and maintenance of the 24-hour PM-10 NAAQS in the Fort Hall PM-10 nonattainment area.

Hot Pour Pot Handling

The second alternative control technology is hot pour pot handling. In this process, the slag is tapped from the furnace into short slag runners and then into large cast iron crucibles, or “pots”, that are placed adjacent to or below the furnace. The slag tapping system (tap hole, runners, dump to pot, and pot) is totally enclosed in a “pot room” and kept under a negative pressure. All fumes and particulates are captured by the enclosure and evacuated to the furnace scrubbers (source 18d, 18e, 18f, and 18g). A small amount of PM-10 is emitted when the pot transporter opens the doors to the pot room and removes a pot for transport to the slag pile. Slag in the

molten state is then transported to the slag storage pile where it is dumped in the molten state onto the pile.

Implementation of hot pour pot handling would significantly reduce fugitive and tap hood emissions from furnace tapping as compared with current levels at FMC, but it would not eliminate these emissions entirely. The current tap hood design could be improved to capture more emissions and send them to the control device. FMC has already installed redesigned tap hoods on two furnaces and has agreed to install this design on the two remaining furnaces as part of the RCRA consent decree.

Transport of molten slag and dumping of molten slag onto the slag pile will result in emissions of some PM-10 into the atmosphere. The cooling slag in the pot during transport, however, quickly forms a skin on the slag which prevents further emissions. Tapping slag into a pot eliminates the need for the slag pits. Therefore, PM-10 emissions from the slag pit, the crushing, and transporting of recycle slag would be eliminated.

EPA has estimated the anticipated emissions reductions that would be achieved at FMC through implementation of pot handling based on information provided by the facility that currently uses hot pour pot handling. With the pot handling system, PM-10 is emitted from the pots as the pots sit in the "pot room," as the pots are transported to the slag pile, and during the dump of molten slag onto the pile. EPA believes that during these

operations, PM-10 emissions are roughly equivalent to cooling slag emissions. EPA also believes that the emission factor for cooling slag of 3.74 pounds per hour, which was developed from source testing at FMC and which EPA used in the 1996 base-year emission inventory for FMC, is the most representative emission factor available. EPA estimates that 30% of the emissions associated with the cooling would occur within the "pot room", where the emissions would be captured and ducted to the tap hood control device. The remaining 70% of the emissions associated with the cooling slag would be emitted during transport, dumping to the pile, and cooling on the pile. These emissions would be uncontrolled. Assuming the quantity of slag to be processed at FMC remains roughly the same, the emissions in the FMC 1996 emission inventory for cooling slag will remain approximately the same, at 209 pounds per day. Assuming that 30% of emissions would be captured in the “pot room” and that the remaining 70% would continue to be emitted into the atmosphere, PM-10 emissions from this process would be reduced to 146 pounds per day and 23 tons per year at FMC. All other PM-10 emission sources associated with slag handling would be eliminated. In addition, the ambient impact of the remaining emissions should be further reduced through implementation of the pot handling system because the remaining emissions will be distributed over the larger area of the haul roads and dump pile.

Installation of the hot pour pot handling system at FMC may require a significant design and construction effort. The ground below part of the furnace building may need to be excavated to accommodate the pots for tapping, and the building itself might need to be modified to support the furnaces and enclose the pots. Conveyors or carriers would be required to move the pots into place for tapping. Finally, pots and trucks to haul the pots to the slag pile must be purchased and maintained.

As part of the RCRA consent decree, FMC has agreed to design, purchase, and install equipment and to modify the plant as necessary to implement a hot pour pot handling system for its slag ladling operations. In the RCRA consent decree, FMC has agreed to design and purchase the equipment by March 1, 1999, to install the ladling system and complete tapping system upgrades by November 1, 1999, for two furnaces, and to install the ladling system and complete the tapping upgrades for the other two furnaces by November 1, 2000. FMC has also agreed to purchase and install ventilation system upgrades for two of the furnaces by December 1, 2002.

FMC has estimated that it will cost $20.2 million in capital costs to install the ladling and upgrade tapping for all four furnaces and that pot handling will increase its annual operating costs by $200,000 a year (over its current operating

costs). The ventilation system upgrades for two of the furnaces is estimated to cost an additional $5.3 million.

EPA believes that FMC's current furnace scrubber control system (sources 18d, 18e, 18f, and 18g) is adequate for the additional PM-10 emissions that will be captured and controlled after implementation of a hot pour pot handling system. EPA has therefore not included the $5.3 million for these upgrades in the RACT evaluation. Based on the cost estimates provided by FMC, the cost effectiveness of hot pour pot handling is estimated to be $8,260 per ton of PM-10 reductions based on annualized daily worst case emissions.

Conclusion

EPA believes that hot pour pot handling technology is a technologically and economically feasible alternative to the existing slag pit operations at FMC. The hot pour pot handling system is used by the only other currently-operating elemental phosphorous facility. FMC has agreed to install and implement the hot pour pot ladling system in the RCRA consent decree. These facts are strong evidence that the control technology is technologically and economically feasible. Particulate emissions from slag handling significantly contribute to PM-10 concentrations in the nonattainment area which exceed the level of the PM-10 standards. Application of hot pour pot handling is expected to reduce PM-10 emissions from the facility as a whole

by 14%. As discussed below in section III.I. below, these reductions are necessary for attainment of the 24-hour PM-10 NAAQS in the area. EPA therefore believes that hot pour pot handling represents RACT-level controls for slag handling. EPA is not aware of any other control technology for slag handling or any similar process that is expected to result in greater emission reductions.

c. Emission Limitations and Work Practice Requirements

EPA is proposing that FMC be prohibited from using the current slag pit process beginning November 1, 2000. This includes eliminating the discharge of molten slag from furnaces or slag runners onto the ground, slag pit floors (whether dressed with crushed slag or not), or other non-mobile permanent surfaces and eliminating the digging and loading of cold (solid) slag into transport trucks in the slag pit area. EPA is proposing that the prohibition of loading cold slag not apply to the lining of slag pots and the handling (loading, crushing, or digging) of cold slag for purposes of the lining of slag pots. The slag pots may need to be lined in order to protect the pots from the molten slag and prevent wear and tear on the pots.

After November 1, 2000, EPA is proposing that the slag pit and all other current slag handling operations be subject to an opacity limit of five percent. The five percent opacity limit will also apply to any enclosure separate from, but physically

adjacent to, the furnace building that is built to enclose the pot handling system and will ensure that any such building is effectively sealed to prevent the escape of fumes to the atmosphere.

EPA is proposing several exceptions to the five percent opacity limitation for the slag pit and related slag handling operations. EPA is proposing an exemption for visible fugitive emissions due to fuming of molten slag from slag pots during transport from the pot handling room to the slag pile. This exemption is needed because, even though a skim forms quickly over the molten slag that inhibits fuming, some fuming will continue until the slag is completely solidified in the storage pile. EPA is also proposing an exemption for the dumping of molten slag on to the slag pile. There will be visible fuming from the molten slag as it flows from the pot onto the slag pile. Currently EPA is unaware of any control technology or process to reduce or eliminate these fuming emissions. EPA specifically seeks comment from the public on possible emission reduction techniques for this operation. Finally, EPA is proposing a limit of no visible emissions from the recycle material pile, because the pile consists of large material from which no visible emissions should be expected.

2. Calciner Scrubbers (Source 9)

a. Overview of Current Operations

FMC uses two traveling grate calciners to fuse green briquettes into nodules for furnace feed. Each calciner consists of a grate that carries green briquettes through the calciners. Heat is used to drive off volatile organics and to fuse the briquettes which makes the burden stable for handling until introduced into the furnace. There are two exhausts on each calciner. Particulate emissions from each of the two calciner stacks are vented first to a low energy venturi scrubber and then to a John Zink (tm) high energy hydrosonic venturi wet scrubber on each stack. There are two stacks for each John Zink scrubber and therefore, a total of eight calciner point sources. The daily worst case emission rate from the calciner stacks (all eight stacks combined) is 1204 pounds per day and 100 tons of PM-10 per year. The calciner scrubbers account for more than 18% of total PM-10 emissions from FMC.

A high energy wet scrubber is generally considered an effective control technology for particulate emissions. The control efficiency of the current combined low and high energy scrubbers at FMC, however, which were installed in order to comply with the radionuclide NESHAPs, is on the order of 50 to 60%. This level of control is far below the manufacturer’s specification and below the results of pilot testing of this scrubber at FMC prior to full scale construction and operation. FMC has conducted considerable research and development on the

current John Zink scrubbers in the course of assuring compliance with the radionuclide NESHAPs and in an attempt to achieve full calciner production. Little improvement in control efficiency, however, has been achieved since installation in 1992.

Failure of FMC's existing control system to achieve the desired emission reductions appears to be caused by the regeneration of submicron particles in quench water by evaporation of aerosol water droplets in the inlet gasses of the hydrosonic scrubbers. The high pressure fan compresses the gasses, causing isentropic heating of the gas stream as it passes through the fan upstream of the hydrosonic scrubbers. The heated subsaturated gas stream allows evaporation of a portion of the water droplets that are critical to the capture and entrainment of fine particulate, and thus reduces the capture efficiency of the John Zink scrubbers.

b. Evaluation of Alternative Control Technology

Steam Injection with High Energy Wet Scrubbers

There are three alternative control technologies for this source. The first is to modify the existing John Zink scrubbers to improve performance by installing steam injection upstream of the scrubbers. Steam injection is an attempt to saturate the gas stream, create larger particles in the exhaust gasses, and, thus, increase the particle entrainment in the high energy wet scrubbing system.

Adding steam injection to FMC's existing system would help assure saturation of the gas entering the scrubbers and improve performance. EPA expects that the addition of steam injection could achieve an emissions rate of 0.01 grain per dry standard cubic foot of air. By EPA estimates, steam injection would result in an emission reduction of 23% over current emissions, or a total emission reduction from all calciner scrubbers of 23 tons per year from current conditions. There is a concern, however, that steam injection will not adequately saturate the gas stream-- steam injection will increase the gas temperature and therefore increase its capability of holding more water vapor, thus defeating the intent of adding the steam.

Based on estimates provided by FMC in the RCRA settlement negotiations, the capital costs to modify the John Zink scrubbers for steam injection are expected to be $2.5 million and the annual operating expenses for the system are estimated to be $120,000. The cost effectiveness of steam injection is $38,120 per ton of particulate removed.

Spray Tower with Hydrosonic Scrubbers

The second technology, similar to steam injection, is installation of a spray tower between the low energy scrubber and the John Zink scrubbers. Spray will saturate the gas stream and create larger particle sizes and increase scrubber performance.

Installation of a spray tower between the low energy

scrubbers and the John Zinc scrubbers on FMC's current control system for the calciners would provide a better means to saturate the gas stream, avoid regeneration of particulates, and avoid evaporation of water droplets at the inlet of the scrubber. The spray towers would need to be capable of generating water drops of 40 micrometers in diameter and thus allow for the rapid evaporation needed before entering the throat of the hydrosonic. Water would not raise the temperature of the gas stream and would provide for a saturated gas stream. EPA estimates this technology would achieve an emission level of 0.005 grains per standard dry cubic foot (gr/dscf) resulting in a reduction of 75% over current emissions, or a total emission reduction from all calciner scrubbers of 74 tons per year. Based on worst case 24-hour emissions annualized over a year, the cost effectiveness of adding a spray tower is just under $5,000 per ton of PM-10 removed. Using the existing hourly emission rate of 6.27 pounds per hour from each outlet stack, a 75% reduction would mean the calciner scrubbers could achieve an emission limitation of 1.57 pounds per hour from each hydrosonic outlet stack.

Baghouse

The third technology is replacement of the existing John Zink scrubbers with baghouses. Baghouses typically have proven control efficiencies of 99% for particulate matter.

A baghouse is an efficient and commonly-accepted technology

that could be used to control particulate emissions from the calciners. Expected emission reductions are 16 and 19 tons per year depending on the calciners. Installation of a baghouse system on each calciner exhaust is technically feasible but not desirable because of potential adverse environmental effects. The calciners are a significant source of Polonium-210, a pollutant regulated under the radionuclide NESHAPS. With a baghouse, which is a dry system that does not use water, Polonium-210 would be captured in the dust and would be retained on the baghouse walls, hoppers, and bags. This would create health and safety problems for maintenance workers. Capital costs for installation of a baghouse system for each calciner is estimated to be $1.7 million. Annual operating costs, including capital recovery, are estimated at $1.26 to $1.28 million for each calciner. This results in a cost effectiveness of the baghouse system of $57,032 per ton of particulate removed.

Conclusion

EPA believes that modification of the John Zink scrubbers by installation of a spray tower represents RACT-level controls. This alternative is technologically and economically feasible and could achieve results comparable to, or better than, a baghouse. FMC has agreed in the RCRA settlement to spend $2.5 million for the purchase, installation, modification, testing, and operation of the necessary equipment for enhancing the performance on the

existing John Zink scrubbers on the calciners to achieve an overall control efficiency of 90%. The system is required to be installed, tested, and fully operational by December 1, 2000. EPA believes that installation of the spray towers will be less expensive and will result in a higher control efficiency than steam injection. EPA is not aware of any other alternative system that achieves comparable control efficiency.

c. Emission Limitations and Work Practice Requirements

EPA is proposing a mass emission limitation of 0.005 gr/dscf for each calciner stack, effective December 1, 2000. This is equivalent to a 75% reduction from current maximum emissions. FMC has committed to a 90% overall control efficiency for calciner emission reductions in the RCRA consent decree. EPA believes that this emission limitation can be achieved by at least one of the available alternate modifications to the existing control system.

EPA is not proposing an opacity limit for the calciner scrubbers. Emissions from the calciner scrubbers have a visible steam plume because of the wet scrubber. Method 9 states that opacity observations shall be made at the point of greatest opacity in that portion of the plume where condensed water is not present. 40 CFR part 60, appendix A, method 9, section 2.3. Because of the close proximity of the four stacks for each calciner at FMC, it is likely that the individual stack plumes

will have combined into a single plume just prior to the point where the steam plume dissipates and it will therefore be very difficult to take a proper reading. As discussed below, EPA is proposing parametric monitoring and other monitoring, recordkeeping, and reporting requirements to ensure that the calciner scrubbers comply with the proposed emission limit.

3. Elevated Secondary Condenser Flare and Ground Flare (Source 26a)

a. Overview of Current Operations

Furnace gasses are used as fuel for the calciners. Excess furnace gasses are ducted to either the elevated carbon monoxide (CO) secondary condenser flare or the ground flare. Furnace CO gas, in excess of that required to fuel the calciners, is flared in the elevated secondary CO flare to maintain pressure in the furnaces and CO lines. CO gas in excess of that needed to maintain pressure is then flared in the ground flare. The CO gas contains elemental phosphorous which is oxidized in the flares to phosphorous pentoxide and emitted as particulate matter.

In addition to flaring excess furnace CO gas, the secondary condenser periodically becomes contaminated with solidified phosphorus and must be “flushed” with one of two processes. One process is called a “mini-flush” and it occurs on a daily basis. The second process is a “hot-flush” in which the entire condensing system is flushed by elevating the temperature of the

condensing system to liquify and flush all phosphorus in the system. Emissions from these processes are included in the 1996 emission inventory for FMC and are identified separately.

The initial 1990 base year emissions inventory for the area, which was relied on by IDEQ in its May 1993 SIP submittal, estimated emissions from the elevated secondary condenser and ground flares at 23.7 pounds per day of PM-10. The 1996 emission inventory estimated emissions from these sources at 350 pounds per day of PM-10 on a worst case daily basis. Emissions from mini-flushes and hot-flushes are estimated at 2740 pounds per day of PM-10. The disparity in emissions between the 1990 inventory and the 1996 inventory for FMC is because the 1990 inventory did not include mini-flush emissions nor additional information and analysis of furnace gas composition.

b. Evaluation of Alternative Control Technology

EPA initially proposed ducting excess CO furnace gas from both the elevated secondary condenser flare and the ground flare to an enclosed burner and control device during public workshops in Pocatello and Fort Hall in September 1997. In the RCRA consent decree, FMC has agreed to this approach and to reduce emissions during flaring, mini-flushes and hot flushes by 95%. In the burner/combustion device, the excess CO furnace gas will be burned under controlled combustion conditions to oxidize CO to carbon dioxide and elemental phosphorus to form particulate

phosphorus pentoxide. The off-gas from the enclosed burner/combustion device will be sent to a high efficiency scrubber where the particulates will be removed before the gas is vented to the atmosphere. FMC anticipates removal of over 95% of particulates using this system. FMC has estimated the capital costs of this system at $18.5 million, with an additional $700,000 in annual operating costs. The cost effectiveness, based on worst case daily emissions over the year, is $5172 per ton. FMC has agreed to have this new CO burner installed and fully operational by January 1, 2001.

The secondary condenser flare and ground flare are sources unique to the elemental phosphorus industry. The excess CO burner which FMC has designed and proposes to implement is the only alternative control technology currently available of which EPA is aware. EPA believes that the excess CO burner is both technically and economically feasible. FMC's agreement to install and operate the technology as part of the RCRA consent decree is persuasive evidence of this fact. As discussed below in section III.I., the emission reductions resulting from implementation of the CO burner are necessary to attain the PM-10 standard.

EPA is not aware of any other control technology for the flares that would be more effective in reducing emissions than the excess CO burner.

c. Emission Limitations and Work Practice Requirements

EPA is proposing a mass emission limitation of 6.5 pounds per hour of PM-10 emissions from the excess CO burner, effective January 1, 2001. This limitation is derived from the total estimated emissions from the flares (2740 + 350 pounds per day) divided by 24-hours per day and assuming 95% control efficiency. EPA proposes to require that the reference test method be conducted during operating conditions that represent maximum emissions, that is, during either a mini-flush or a hot-flush.

EPA is proposing a limit of no visible emissions, effective January 1, 2001. Although the 1995-1996 visible emission survey reported visible emissions from this source, EPA believes that installation and operation of the CO burner should enable FMC to meet a requirement of no visible emissions.

Because of the high emissions from the flares and the predicted impact on ambient PM-10 concentrations, EPA is also proposing interim work practice measures that FMC must comply with until the excess CO burner is fully operational. These work practice requirements are based on interim measures FMC has agreed to implement as part of the RCRA consent decree to reduce the ambient impact of emissions from the flares until the excess CO burner is fully operational. EPA is proposing that FMC limit mini-flushes to no more than 50 minutes per day (based on a monthly average). FMC’s 1997 data indicate that mini-flush

durations averaged 100 minutes per day, which would result in an average emission reduction of 50%. EPA is also proposing a prohibition on mini-flushes unless the flow rate of recirculated condenser water (phossy water) falls to or below 1800 gallons per minute or the secondary condenser outlet temperature meets or exceeds 36 degrees Centigrade. These operating parameters are designed to ensure there is no bias toward conducting mini-flushes at night, when winds are generally lower and there is less dispersion.

Under the RCRA consent decree, the operating parameters for conducting mini-flushes do not apply during periods of "malfunction," as defined in 40 CFR 60.2. To ensure consistency with the RCRA consent decree, EPA is similarly proposing that the operating parameters for conducting mini-flushes not apply during periods of "malfunction." EPA is also proposing that FMC be required to submit a bimonthly report on mini-flushes showing FMC's compliance with the interim emission reduction requirements.

4. Phosphorus Loading Dock (Source 21)

a. Overview of Current Operations

The phosphorus loading dock (or "phos dock") is the location where condensed phosphorus from the primary and secondary condensers is further clarified, stored, and loaded into railcars for shipment. Phosphorus is transferred by water displacement so

that it is never exposed to air and thereby does not burn. At the phosphorus-water interface is a layer called sludge which is an emulsion of phosphorus, water and contaminants. Because sludge does not form a distinct layer between the phosphorus or water layers, it is difficult for operators to determine when tanks are full. Spillage of sludge, phosphorus, and phossy water has been a frequent occurrence at the FMC facility, leading to phosphorous fires which in turn lead to excessive fugitive emissions from the phos dock (source 21b) that in turn overwhelm and cause excessive emissions from the Andersen scrubber on the phos dock (source 21a).

EPA has not been able quantify fugitive emissions or excessive stack emissions from the phos dock attributable to spillage and other "upset"[18] conditions because such events are intermittent and of varying duration. The emission inventory for FMC lists point source emissions from the phos dock at 34 pounds per day. This emissions estimate, which represents so called "worst case emissions," represents emissions from the Andersen scrubber assuming normal operations and full phosphorus production. It does not include the fugitive emissions due to "upset" conditions or the excessive emissions from the scrubber

[18]EPA is using the term "upset" conditions here to mean operations that do not reflect normal operating conditions. EPA does not believe that these conditions qualify as a "malfunction" or an "emergency" because EPA believes they could be avoided through better design or better operation and maintenance.

that occur when the Andersen scrubber is overwhelmed due to "upset" conditions.

Emissions from the phos dock area, however, are of great concern to the public and the Tribes. The phos dock is located at the front of the FMC facility in view of the general public from the nearby highway. Based on EPA's own observations and verbal communications from the Tribal Air Quality Office, EPA believes that fugitive emissions and excess stack emissions from the phos dock due to "upset" conditions could be contributing to the measured exceedences of the PM-10 NAAQS at the Tribal monitors. FMC also appears to be concerned about the public perception that visible emissions from the phos dock area contribute to PM-10 levels that exceed the standard, as evidenced by FMC's commitment in the RCRA consent decree to make improvements in the phos dock area, which is discussed in more detail below.

b. Evaluation of Alternative Control Technology

The phos dock currently employs capture and control technology. Captured emissions from the sumps and launder are ducted to the phos dock Andersen scrubber. The Andersen scrubber is an efficient control device for PM-10 that is primarily comprised of phosphorus pentoxide, with a control efficiency of 99.5% for this pollutant stream. Much of the equipment used to capture (as oppose to control) emissions from the phos dock at

the FMC facility, however, is old and obsolete. Sump tops are corroded, pumps are old, and seals leak. The launder is warped, resulting in phossy water pools and phosphorus fires. Spills have contaminated storage tank insulation with phosphorus requiring continuous flooding of tank insulation with water. There is no single control device or upgrade to the control system that is needed for reducing emissions from the phos dock. Rather, replacement and upgrading of the existing emissions capture system at numerous places throughout the phos dock and improved instrumentation for storage tanks to help operators avoid spillage are needed to prevent the recurrence of "upset" conditions which result in fugitive and excessive stack emissions in the phos dock area.

FMC has committed as a SEP project in the RCRA consent decree to spend $750,000 by January 1, 2000 to upgrade and improve the capture and control of emissions from the phos dock area. This commitment involves basic improvements in measuring phosphorus levels in storage tanks, upgrading design, and replacing old, worn, and obsolete equipment. FMC has acknowledged that this SEP project is intended to reduce emissions that result from "upset" conditions.

The phos dock is a source unique to the elemental phosphorous industry, and EPA is not aware of any control technology that would control emissions from this source better

than the Andersen scrubber. EPA believes that the improvements to the capture system for emissions from the phos dock area that FMC has agreed to undertake as part of the RCRA consent decree are both technically and economically feasible, as evidenced by FMC's agreement. As discussed above, the emission inventory does not include the fugitive emissions and excessive stack emissions in the phos dock area attributable to upset conditions. EPA nonetheless believes that the improvements to the phos dock area designed to eliminate "upsets" are necessary for attainment of the PM-10 standard because the attainment demonstration has not accounted for the emissions from the phos dock area attributable to "upset" conditions. In other words, the attainment demonstration assumes that the only emissions from the phos dock area are 34 pounds per day of emissions from the Andersen scrubber under normal operating conditions. To the extent fugitive and point source emissions from the phos dock area exceed this amount, those emissions must be eliminated for attainment to be demonstrated.

c. Emission Limitations and Work Practice Requirements

EPA proposes that, effective November 1, 1999, emissions from the phos dock Andersen scrubber (source 21a) to 0.007 grains per dry standard cubic feet, a limit based on the emissions for this source included in the emissions inventory. EPA believes that FMC can achieve this limit on a continuous basis if FMC

eliminates the routine “upset” conditions that have been occurring in the phos dock area through the scheduled improvements to the capture system for the phos dock area and instituting better operations and maintenance procedures. Under the RCRA consent decree, the improvements to the phos dock area are scheduled to be completed by November 1, 1999.

EPA is proposing an opacity limitation of five percent averaged over six minutes for point source emissions from the phos dock Andersen scrubber, effective November 1, 1999. Again, EPA believes that, with the scheduled improvements to the phos dock area, FMC should be able to achieve continuous compliance with this requirement on and after November 1, 1999. During the 1995-1996 visible emissions survey, visible emissions from the phos dock Andersen scrubber were observed for three 15 minute observation periods, with reading taken every 15 seconds. During two of the 15 minute observation periods, no visible emissions were observed. During the third 15 minute observation period, visible emissions above five percent opacity were observed for ten of the 60 observations in that 15 minute period, with a high of 40%. Although the average opacity over this third 15 minute period was 4.75%, the highest six minute average within this third 15 minute period was 10.625% and would represent an exceedence of the proposed five percent opacity limit. EPA believes that the scheduled improvements and upgrades to the phos

dock, however, will allow FMC to achieve compliance with the proposed five percent opacity limitation on a continuous basis because these improvements and upgrades will prevent emissions that overwhelm the phos dock Andersen scrubber by preventing phos-fires.[19] An opacity limit of five percent averaged over six minutes allows for limited excursions of short duration over five percent opacity.

For fugitive emissions emanating from the phos dock (source 21b), EPA is proposing an opacity limitation of ten percent averaged over six minutes, effective November 1, 1999. This limitation would apply to fugitive emissions emanating from any operation or location within the phos dock area. Again, EPA believes that the reduction in spills, improvements to the capture system, improved housekeeping, and the other scheduled improvements and upgrades to the phos dock area will enable FMC to comply with the ten percent opacity limit on a continuous basis.

5. Furnace Building (Source 18c)

a. Overview of Current Operations

The furnace building contains several sources of fugitive

[19]The observation forms from the 1995-1996 survey note that no railcar loading occurred during any of the three observation periods. EPA does not expect phos dock emissions to be higher during railcar loading than at other times because phosphorus is produced, clarified, and transferred to storage tanks on a continuous basis, not just during railcar loading. EPA therefore believes that the opacity observed during the 1995-1996 survey is representative of normal operations.

emissions that can escape through doors, windows, vents, and holes in the furnace building. On the ground level of the building, there are the slag and metal tap hoods from which tap emissions can escape. Fugitive emissions from the furnace building from slag and metal tapping are included in the emissions estimate for slag handling.

On the top level of the furnace building (called the “burden level”), the furnace feed (called “burden”) is transported by conveyor belt to feed burden bins above each furnace. Dust build-up on the burden level floor and fugitive emissions from transfer points is a source of fugitive emissions from the burden level of the furnace building. The emissions inventory lists emissions from the burden level of the furnace building at .013 pounds per day, which was derived from information provided by FMC. More recently, FMC has asserted that the current maximum emissions from the burden level of the furnace building could be as high as 2538 pounds per day. Although FMC has provided no documentation to explain the basis for this very high emissions estimate, EPA believes that the difference between the .013 pounds per day included in the emissions inventory and the 2538 pounds per day figure recently provided by FMC are emissions that FMC estimates could occur when the venting dampers on the furnace building are opened as a safety precaution and during other

"upset" conditions.[20]

b. Evaluation of Alternative Control Technology

EPA expects fugitive emissions from the lower level of the furnace building to be greatly reduced through the implementation of hot pour pot handling, which FMC has committed to undertake as part of the RCRA consent decree as discussed in section III.F.1. above. As part of that project, slag and metal tap hood emissions in the furnace building will be reduced by installation of upgraded tap hoods with reduced head space and increased sweep velocities. Under the RCRA consent decree, this project is to be completed by November 1, 2000.

As part of the RCRA consent decree, FMC has also agreed to spend at least $1.5 million to reduce fugitive emissions from the furnace building burden level through increases in ventilation volume and capture efficiency for the conveyor belts and burden bins at the burden level, improved instrumentation and controls on the furnace bins to reduce spillage, and improved housekeeping systems. New controls and instrumentation will reduce reliance on manual operation and visual observation in filling burden bins, thus reducing the occurrence of furnace fires and emissions due to "upset" conditions. Improved housekeeping through more

[20]Again, EPA is using the term "upset" conditions here to mean operations that do not reflect normal operating conditions. EPA does not believe that these conditions qualify as a "malfunction" or an "emergency" because EPA believes they could be avoided through better design or better operation and maintenance.

frequent clean-up of spillage by installation of a vacuum system and upgraded operator procedures will reduce re-entrainment of dust as wind blows through the upper level of the furnace building. As with the phos dock, this SEP project is designed, in part, to reduce the frequency of "upsets." Under the RCRA consent decree, these changes are to be completed by April 1, 2002.

EPA believes that increasing ventilation volume and capture efficiency and improving process control instrumentation at the burden level of the furnace building is economically and technologically feasible, as evidenced by FMC's agreement to undertake these projects under the RCRA consent decree. As discussed above, the emission inventory may not include all of the fugitive emissions at the burden level, in particular, emissions resulting from the opening of the venting dampers on the building and other "upset" conditions. EPA nonetheless believes that the improvements to the furnace building are necessary for attainment of the PM-10 standard because the attainment demonstration has not accounted for the emissions from the burden level attributable to "upset" conditions and, according to FMC, these emissions can be quite high. In other words, the attainment demonstration assumes that the only emissions from the burden level of the furnace building are .013 pounds per day. To the extent fugitive emissions from the burden

level exceed this amount, those emissions must be eliminated for attainment to be demonstrated.

c. Emission Limitations and Work Practice Requirements

EPA is initially proposing an opacity limitation of 20% opacity averaged over six minutes using Method 9 for the furnace building. Twenty percent is the generally applicable opacity limit found in most state implementation plans for sources that are not subject to more stringent limits. Opacity limits in excess of 20% are rare. During the 1995-1996 visible emissions survey, visible emissions from the furnace building were observed for 15 minutes, at 15 second intervals. The readings ranged from five percent to 45%, with a 15 minute average of 17.5% and the highest six minute average of 22%, which would represent an exceedence of the proposed 20% opacity standard. EPA nonetheless believes that FMC can comply with a 20% opacity limit on a continuous basis even before the scheduled improvements to the slag handling practices and the burden level of the furnace building are implemented if FMC institutes improved housekeeping practices, such as increased diligence on the part of burden level operators in filling burden bins without spills and promptly cleaning up any spills that occur. EPA believes FMC can implement such improved housekeeping practices quickly and with little additional expenditure. EPA finds no basis for proposing an opacity limit in excess of 20% for the furnace building, even

before the slag handling and furnace burden building improvements are implemented.[21]

Once the improvements to the slag handling process and the furnace building are completed by April 1, 2002, fugitive emissions from processes within the furnace building should be greatly reduced. From this date on, EPA believes that FMC should be able to meet a five percent opacity limitation averaged over 6 minutes using Method 9. EPA notes that this five percent limit is higher than the limit of no visible emissions that is proposed for most other building at the FMC facility.

G. Monitoring, Work Practice, Recordkeeping, and Reporting Requirements

EPA believes it has broad latitude, when promulgating a Federal Implementation Plan, to include such monitoring, work practice, recordkeeping, and reporting requirements as are necessary or appropriate to ensure compliance with the proposed standards. Including such requirements in the FIP itself is particularly appropriate where, as here, the FIP is a regulation that applies only to a single facility and a greater degree of specificity is possible than in the case of a generally

[21]In this regard, EPA notes that an air operating permit issued by the State of Idaho to the FMC facility in 1980 contained a facility-wide opacity limit of 20%. The 20% opacity limit purported to apply to, among other things, the furnace building. Although EPA believes that the State of Idaho does not and, at the time of issuance of the permit, did not have authority to regulate FMC, EPA notes that FMC has claimed over the years that it was capable of complying with the State-issued permit.

applicable rule that applies to many source categories or many sources. Therefore, EPA is proposing as part of this FIP monitoring, work practice, recordkeeping, and reporting requirements that EPA believes will help assure compliance with proposed emission limitations and work practice requirements.

EPA notes that the FMC facility is a major stationary source under title V of the Clean Air Act and will be required to have an operating permit under CAA section 502(a) (referred to here as a "title V permit"). Because FMC is located in Indian country, FMC must apply for and will be subject to a title V permit issued by EPA under the federal operating permit program, 40 CFR part 71, unless the Shoshone-Bannock Tribes apply for and receive EPA delegation or approval of an operating permit program under the Tribal Authority Rule and 40 CFR part 70.[22] Revisions to the part 71 program, which will establish the date FMC is required to submit an application for a title V permit to EPA, are expected to be promulgated in early 1999.

Title V operating permits are required to contain all applicable requirements of the Clean Air Act to which the source is subject; monitoring, recordkeeping, and reporting requirements to ensure compliance with all applicable requirements; and standard permit terms addressing administrative issues. A major

[22]The Shoshone-Bannock Tribes could also request full or partial delegation of the part 71 program from EPA under 40 CFR 71.10 and 40 CFR part 49 (Tribal Authority Rule), in which case EPA would remain the permit-issuing authority.

goal of the title V operating permit program is to clarify what Clean Air Act requirements apply to a source in a single document, thereby better enabling the source, EPA, states, tribes, and the public to better understand the requirements to which the source is subject and whether the source is meeting those requirements. See generally 56 FR 21712 (May 10, 1991).

Once this FIP is promulgated, FMC will also be subject to the compliance assurance requirements (referred to as "CAM") of 40 CFR part 63 for those emission units with control devices that have potential pre-control device emissions of 100 tons per year or more of PM-10. 40 CFR 64.2(a). As such, FMC will be required to submit to the permitting authority along with its title V operating permit application a monitoring plan that meets the design requirements of 40 CFR 64.3, 64.4, and 64.5. The requirements of the approved monitoring plan will then become requirements of FMC's title V permit. 40 CFR 64.6 and 64.7.

Because FMC is required to apply for a title V permit and to submit a CAM plan, EPA has carefully considered the extent to which monitoring, recordkeeping, and reporting requirements necessary to assure compliance with the proposed PM-10 emission limitations and work practice requirements should be included in the proposed FIP or should be deferred to the title V permit issuance process. As stated above, EPA believes it has broad latitude, when promulgating a FIP, to include such monitoring,

recordkeeping, and reporting requirements as are necessary or appropriate to ensure compliance with the proposed standards, especially in the case of a source-specific FIP. Because of the serious air quality problem that exists in the vicinity of FMC and the importance of compliance with the proposed emissions limitations and work practice standards to the protection of air quality in the vicinity of FMC, EPA is proposing as part of this FIP monitoring, work practice, recordkeeping, and reporting requirements for the purpose of ensuring compliance with the proposed emission limitations and work practice standards. Additional monitoring, work practice, recordkeeping, and reporting requirements will be included in the title V permit as necessary and appropriate to assure compliance with the requirements of this FIP and the requirements of the title V program. For example, as discussed below, EPA proposes that FMC be required to take prompt corrective action when certain operating parameters fall outside designated ranges. Although FMC is required to submit the ranges to EPA under this FIP, the precise ranges will be approved as part of FMC's title V permit. As another example, although FMC is required to submit an operations and maintenance plan as part of this proposed FIP, EPA may determine it is appropriate to include certain provisions of the plan in FMC's title V permit. To clarify this point, EPA proposes to include a provision that specifically authorizes

additional monitoring, recordkeeping, and reporting requirements to be established in FMC's title V permit as appropriate. EPA has also clarified that, although FMC's obligation to submit proposed parameter ranges for certain units is in addition to and separate from FMC's obligations under the CAM rule, monitoring for any pollutant specific emissions unit that meets the design criteria of 40 CFR 64.3 and the submittal requirements of 40 CFR 64.4 may be submitted to meet the requirement to submit proposed parameter ranges under the proposed FIP.

1. Monitoring and Work Practice Requirements

a. Annual Source Testing of Point Sources

EPA is proposing that FMC be required to conduct a performance test to measure PM-10 emissions from most point sources on an annual basis. This will result in a requirement to test more than twenty-five individual emission sources each year. FMC could meet this requirement by implementing an in-house testing program, as many pulp mills in Washington and Oregon have done in response to similar annual testing requirements, or by hiring an outside consultant to perform the testing. The proposed FIP is written to allow the source tests to be conducted on a staggered basis so long as each annual test for a particular source is conducted within 12 months of the most recent previous test.

b. Monitoring Devices

i. Sources Controlled by Baghouses

When operating properly, the particulate removal efficiency of a baghouse is very high (99.9 to 99.99% efficient). Two primary problems, however, can result in increased emissions from systems controlled by baghouses. First, reduced gas flow through the baghouse system due to excessive buildup of the dust cake on the bags or other deterioration in the system results in inadequate dust capture at the emission point controlled by the baghouse and increased fugitive emissions at the capture point. Second, holes or tears in the bags allows the dirty gas to leak through the bags.

EPA proposes that FMC be required to install two monitoring devices to guard against these problems. First, EPA proposes to require FMC to install on all point sources controlled by baghouses a device for continuously measuring and recording pressure drop across the bughouse. Pressure drop is an indirect measure of flow rate through the baghouse system. Monitoring pressure drop is an effective means for detecting reduced gas flow through the baghouse system due to excessive buildup of the dust cake on the bags or other deterioration of the baghouse system. Monitoring pressure drop is also important because operation of a baghouse under excessively high pressure drop conditions can lead to accelerated bag deterioration by erosion through pin holes in the bags. Monitoring pressure drop is also

useful in diagnosing other problems that may be contributing to high particulate emissions from the baghouse system. FMC may have in fact already installed devices to measure pressure drop on some of its baghouses because such devices are commonly used to evaluate the performance of a baghouse.

EPA proposes to require that FMC submit a proposed parameter range of operation for pressure drop for each baghouse that is representative of compliance with the applicable emission limitations and work practice standards. The parameters would be approved through the title V permit issuance process or as a modification to FMC's title V permit. Once those proposed parameter ranges are established in FMC's title V permit, EPA proposes that FMC be required to maintain and operate the source to stay within the approved range and to take immediate corrective action to bring source operation back within the approved range if an excursion from the approved range occurs. Operating outside of an approved range would require corrective action. Similar monitoring is routinely required for baghouses by New Source Performance Standards. See generally 40 CFR part 60.

To provide early detection of leaks and holes in bags, EPA proposes to require FMC to install and operate a triboelectric monitor on each baghouse to continuously monitor and record the readout of the instrument response for all baghouses. This type of baghouse leak detector is sensitive enough to detect even very

small leaks. Given the normal variation in pressure drop, monitoring pressure drop alone is not effective for detecting smaller holes and tears in bags. A triboelectric monitor is also more likely to detect a leak than a continuous opacity monitor and is much less expensive than an opacity monitor. In addition, because a triboelectric detector provides a continuous output, a leak will be detected much earlier than by periodic inspection of the equipment or visible emission observations.

EPA proposes that the triboelectric monitors be installed, maintained, and operated in accordance with the manufacture's specifications and EPA's guidance document, Office of Air Quality Planning and Standards (OAQPS): Fabric Filter Bag Leak Detection Guidance, EPA 454/R-98-015 (Sept. 1997). The guidance document discusses the process for establishing a range of operation so that an "alarm," as defined in and as determined in accordance with the guidance, does not occur. EPA proposes to require that FMC be required to operate each baghouse so as to stay within the approved range and to take immediate corrective action to bring source operation back within the approved range in the event of an excursion.

ii. Sources Controlled By Scrubbers

With respect to the calciner scrubbers (source 9) and the Medusa Andersen scrubbers that control the furnaces (sources 18d, 18e, 18f, and 18g), EPA proposes to require FMC to install

devices for the continuous measurement and recording of pressure drop, scrubber liquor flow rate, and scrubber liquor pH on all sources controlled by scrubbers. Pressure drop and scrubber liquor flow rate are common indicators of performance of scrubbers. See generally 40 CFR part 60. The calciners and the furnaces are controlled by scrubbers and have significant phosphorous pentoxide emissions. Phosphorous pentoxide dissolves in water to form phosphoric acid, which can be re-emitted as phosphorous pentoxide if the scrubber liquor becomes overloaded due to inadequate blowdown and makeup with fresh water. Monitoring scrubber liquor pH provides a good indication of adequate removal of phosphoric acid from the scrubber liquor through sufficient scrubber blow down. Furthermore, low scrubber liquor pH can result in equipment corrosion and a corresponding reduction in the effectiveness of the control device.

EPA also proposes to require that FMC submit a proposed parameter range of operation for pressure drop, scrubber liquor flow rate, and scrubber liquor pH for each source controlled by a scrubber that is representative of compliance with the applicable emission limitations and work practice standards. Again, the parameters would be approved through the title V permit issuance process or as a modification to FMC's title V permit. Once those proposed parameter ranges are established in FMC's title V permit, EPA proposes that FMC be required to maintain and operate

the source to stay within the approved range and to take immediate corrective action to bring source operation back within the approved range if an excursion from the approved range occurs.

For the other two sources controlled by scrubbers at the FMC facility, the phos dock Andersen scrubber (source 21a) and the excess CO burner (source 26b), EPA proposes to require that FMC install and operate a device to continuously measure and continuously record the pressure drop across the scrubber. As with the other monitoring devices, EPA proposes to require that FMC submit a proposed parameter range of operation for pressure drop that is representative of compliance with the applicable emission limitations and work practice standards, to maintain and operate the source to stay within the approved range, and to take immediate corrective action if an excursion from the approved range occurs.

iii. Pressure Relief Vents

As discussed above in section III.E.5. above, EPA proposes to require FMC to install continuous temperature indicators and recorders on each of the pressure relief vents (source 24) to detect when a pressure release from a furnace begins and ends.

c. Operations and Maintenance Plan

EPA proposes that FMC be required to develop, submit to EPA, and implement a written operations and maintenance (O&M) plan

covering all sources of PM-10 emissions at the FMC facility, including uncaptured fugitive and general fugitive emissions of PM-10. The purpose of the O&M plan is to ensure each source at the FMC facility will be operated and maintained consistent with good air pollution control practices and procedures for maximizing control efficiency and minimizing emissions at all times, including periods of startup, shutdown, malfunction, emergency, and to establish procedures for assuring continuous compliance with the emission limitations, work practice requirements, and other requirements of this proposed FIP. The development of O&M plans is required of sources under several standards recently promulgated under section 112 of the CAA, as well as under some state implementation plans. See 40 CFR 63.545; 40 CFR 63.803(a) and 63.803(c); 40 CFR 63.306(a); 40 CFR 63.105(b); WAC 173-400-101(4); OAPCA Regulation 1, Section 5.03 (f); PSAPCA Regulation 1, Section 5.05(e).

Requiring FMC to develop and implement an O&M plan is particularly appropriate for several reasons. First, approximately 22% of all emissions from FMC are uncaptured fugitive emissions. EPA has not proposed mass emission limitations for these fugitive sources because of the difficulty of measuring such emissions. Good operations and maintenance procedures are especially important for controlling fugitive emissions because much of the control efficiency is dependent

upon diligent housekeeping requirements, including vacuum sweeping, application of dust suppressants, and replacing expendable parts and supplies prior to breakdown. Second, EPA believes that many of the air quality problems attributable to the FMC facility have in the past, at least in part, been due to the lack of comprehensive operations and maintenance procedures at FMC. This, in turn, has led to frequent “upsets” at the FMC facility.

EPA proposes to require that the O&M plan address certain identified topics, in addition to good operations and maintenance procedures for all sources at FMC. The identified topics include procedures for minimizing fugitive PM-10 emissions from materials handling, storage piles, roads, staging areas, parking lots, mechanical processes, and other processes, including weekly inspection; procedures for the application of dust suppressants to and the sweeping of storage piles, roads, staging areas, parking lots, or any open area as appropriate to maintain compliance with applicable emission limitations; specifying parts or elements of control equipment needing replacement after some set interval prior to breakdown or malfunction; process conditions that indicate need for repair, maintenance or cleaning of control or process equipment (such as the need to open furnace access ports or holes); procedures for the weekly visual inspection of all control equipment; procedures for the regular

maintenance of control equipment; procedures that meet or exceed manufacturer recommendations for the inspection, maintenance, operation, and calibration of each required monitoring device; procedures for the rapid identification and repair of equipment or processes causing an emergency and for reducing or minimizing the duration of and emissions resulting from any emergency; and procedures for the training of staff in the above procedures.

As proposed, FMC is required to submit the O&M plan to EPA for review. Although there is no explicit requirement for EPA approval of the plan, EPA can require FMC to modify the plan. FMC may revise the plan, as necessary and appropriate, so long as the plan meets the identified requirements and so long as FMC provides EPA with copies of any revisions. FMC is required to review and revise the plan as necessary at least annually. Failure to implement the O&M plan would be a violation of the FIP.[23]

In the RCRA consent decree, FMC agreed to take measures to minimize fugitive emissions from the north-east portion of the facility, which includes the main shale pile (source 2), the emergency/contingency raw ore shale pile (source 3), some roads (source 22), and related staging areas. More specifically, FMC

[23]As discussed above, EPA may determine it is appropriate to include certain provisions of FMC's O&M plan in FMC's title V permit. In that event, FMC could revise those provisions of the O&M plan only in accordance with the permit revision procedures of 40 CFR part 70 or 71, as appropriate.

has agreed to submit a dust control plan that specifies the actions FMC will take, including applying more dust suppressant, increasing cleaning and sweeping of roads, increasing water-application during dry weather, and using slag to cover unpaved areas. EPA believes the requirements of the RCRA consent decree in this regard are consistent with the O&M requirements in this proposal.

d. Other Periodic Inspections and Testing

EPA is also proposing specific inspection requirements for certain sources in order to provide a basis for identifying and correcting control equipment and process problems in a timely manner and to minimize emissions. For each source subject to an opacity limit of no visible emissions, EPA is proposing that an observer make a visual observation of visible emissions from each source at least once each week, and that FMC take corrective action if any visible emissions are observed for any period of time during the observation period. Because the proposed standard for these sources is no visible emissions, the observation of visible emissions would constitute a violation. A visible emissions observation is required upon completion of the corrective action to ensure a return to compliance. Such periodic self-evaluation requirements are common in the NSPS. See generally 40 CFR part 60.

For each fugitive emission source and point source subject

to a numerical opacity limit, EPA is proposing that an observer make a visual observation of visible emissions from each such source at least once each week. If visible emissions are observed, FMC would be required to determine if any corrective action is needed and, if so, to take appropriate corrective action. Based on the visible emissions surveys, EPA believes that visible emissions at the FMC facility frequently indicate that the source in question is not being properly operated or is in need of maintenance. The observance of visible emissions would require corrective action but would not constitute a violation if prompt action was taken, unless the numerical opacity standard is exceeded. Where corrective action is taken, a visual observation is required upon completion of the corrective action. This weekly inspection requirement is intended to ensure prompt identification and correction of control equipment and process problems.

EPA proposes to allow FMC, after conducting weekly inspections for one year without documenting any visible emissions with respect to a particular source to conduct monthly inspections for that source. The inspection schedule would revert to a weekly schedule for a source if visible emissions were observed during any monthly inspection of that source.

With respect to the main shale pile (source 2) and the

emergency/contingency raw ore storage pile (source 3), EPA is proposing that FMC analyze a representative sample of each pile for moisture content using ASTM Standard D2216-92 at least once each month. FMC is required to submit a proposed sampling plan to EPA for review and approval 30 days prior to any required sampling. All sampling must thereafter adhere to the plan.

e. Monitoring Malfunctions and Data Availability

EPA proposes to require that monitoring with all required monitoring devices, such as pressure drop measurement devices and temperature detectors, be operated at all times that the process being monitored is in operation, except during monitoring malfunctions, associated repairs, and required quality assurance or control activities. Monitoring data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities will not be used for data averages and minimum data availability requirements, but data collected at all other times would be used in assessing control device operation. These requirements, including the definition of "monitoring malfunction," are based on similar provisions in the Compliance Assurance Monitoring rule. See 40 CFR 64.7(c). EPA has also included a minimum data availability requirement for all monitoring devices of 90% on a monthly average basis.

2. Recordkeeping Requirements

In general, EPA proposes to require that FMC keep records of

all required monitoring information. Parts 70 and 71 require records of all required monitoring information that include the date, place and time of the sampling or measurement, the analytical methods used, the results of the analysis, and the operating conditions at the time of sampling. See 40 CFR 70.6(a)(3)(ii)(A) and 71.6(a)(3)(ii)(A). Parts 70 and 71 also require the retention of all required monitoring data and support information for a period of at least five years. See 40 CFR 70.6(a)(3)(ii)(B) and 71.6(a)(3)(ii)(B). Because FMC is subject to the title V operating permit program and will be issued a title V operating permit, EPA believes it is appropriate to make the general recordkeeping requirements in the proposed FIP consistent with parts 71 and 70.

EPA has also more specifically identified the recordkeeping requirements relating to each required inspection and visible emissions observation, including the date of the inspection or observation, what was observed, and the time, date, and nature of any corrective action taken; the parameters required to be measured under the monitoring requirements; any excursions from approved ranges, and the time, date, and nature of any corrective action taken; the time, date, and duration of each pressure release from a furnace pressure relief vent; the time, date, and duration of each flaring of the emergency CO flares; application of dust suppressants; frequency of road sweeping; and moisture

content records. Until the secondary condenser flare is eliminated, EPA proposes that FMC be required to keep records of all mini-flushes, include the date, time, duration, water flow rate, and temperature.

EPA also proposes that FMC be required to keep a maintenance log for each control device, which will include information on all inspections and maintenance activities on the control device, and evidence of certification and recertifcation of all individuals who conduct required visible emissions observations.

3. Reporting Requirements

Because FMC will be subject to a title V operating permit, EPA used the reporting requirements of parts 70 and 71 as a starting point for the reporting requirements proposed in this FIP. Thus, EPA proposes to require that FMC submit a report of all required monitoring every six months, which report must clearly identify all instances of deviations. See 40 CFR 70.6(a)(3)(iii)(A) and 71.6(a)(3)(iii)(A). EPA has specifically identified certain items that must be addressed in this report, including excess emissions and excursions from approved operating ranges, corrective action taken, and a written report of each annual performance test. Parts 70 and 71 require sources to submit a compliance certification at least annually and more frequently if required by the permitting authority. 40 CFR 70.6(c)(5) and 71.6(c)(5). Given the contribution of FMC to the

PM-10 nonattainment problem in the Fort Hall PM-10 nonattainment area, EPA proposes to require that FMC submit, as part of the semi-annual report, a compliance certification meeting the requirements of parts 70 and 71 on a semi-annual basis. The semi-annual report must be certified by a "responsible official" for FMC as to its truth, accuracy, and completeness in accordance with the compliance certification requirements of parts 70 and 71.

EPA also proposes to require the prompt reporting of violations of the requirements of the proposed FIP, and has used the default definitions of "prompt reporting" in part 71 for those situations where the proposed FIP does not establish a required time period for reporting. See 40 CFR 71.6(a)(3)(iii)(B). This would require reporting to EPA by telephone or fax, within 48 hours of occurrence, all excess emissions that continue for more than two hours, followed by a written notice within ten days. All other violations would be reported as part of the semi-annual report. The requirement to report excess emissions applies regardless of whether FMC asserts that the excess emissions were due to startup, shutdown, scheduled maintenance, or emergency.

As discussed above, EPA proposes that FMC be required to submit a proposed range of operation for each parameter required to be monitored under the proposed FIP, along with documentation

demonstrating that operating the source within the proposed range will provide a reasonable assurance of compliance with the proposed emission limitations and work practice standards. The proposed range of operation will be approved by EPA through the title V permit issuance process.

Until the secondary condenser flare is eliminated, EPA proposes to require that FMC submit a bi-monthly report to EPA regarding the operating parameters for each mini-flush and the total mini-flush time in minutes for each month, the number of operating days for the secondary condenser, and the average minutes per operating day for each month. This requirement is based on a requirement in the RCRA consent decree.

EPA strongly encourages FMC to provide to the Shoshone-Bannock Tribes Air Quality Program copies of all information required to be submitted to EPA under this proposed FIP.

H. Compliance Schedule

Sections 172(c)(1) and 189(a)(1)(C) of the CAA, read together, require that moderate area PM-10 nonattainment plans submitted by States provide for implementation of RACM and RACT by existing sources of PM-10 no later than December 10, 1993. In cases where the moderate area deadline for the implementation of RACM/RACT had passed at the time the state submitted its plan, EPA has concluded that the RACM/RACT required in the SIP must be implemented "as soon as possible." Delaney v. EPA, 898 F.2d 687,

691 (9th Cir. 1990). EPA has interpreted this requirement to be "as soon as practicable." See 55 FR 41204, 41210 (October 1, 1990). Where, as here, EPA is exercising its discretionary authority under sections 301(a) and 301(d)(4) of the CAA and 40 CFR 49.11(a) to promulgate a FIP for a moderate PM-10 nonattainment area in Indian country as necessary and appropriate to assure implementation of RACT in order to protect air quality during the transition to implementation of newly-promulgated PM NAAQS, EPA believes it is appropriate to require that the controls be implemented as soon as practicable.

In general, EPA is proposing that FMC be required to comply with the emission limitations, work practice requirements, and monitoring, recordkeeping, and reporting requirements beginning 60 days after the effective date of this FIP proposal. This includes emission limitations and work practice requirements for those sources for which EPA believes no additional controls or process changes will be necessary for compliance, and the general monitoring, recordkeeping, and reporting requirements of this FIP proposal. Together with the proposed 30-day delay in the effective date of the FIP, FMC will have 90 days from the date the FIP is published until it will be required to comply. EPA believes that this is sufficient time to ensure compliance with those requirements for which no additional controls or process changes will be necessary, as well as to implement general

monitoring, recordkeeping, and reporting requirements.

EPA is proposing to give FMC additional time to comply with those requirements that necessitate design work, purchase of equipment, process or control modifications, or construction of new processes or controls. In proposing the compliance date for these requirements, EPA is proposing the shortest possible compliance date, in light of the time and expenditures necessary for the various projects, and keeping in mind the total number and extent of the production and control changes necessary for compliance with this FIP proposal. Just as States may give consideration to the amount of expenditures and time required of sources to implement control measures in determining the time period for implementation in the SIP planning process (see Criteria for Granting 1-Year Extensions of Moderate PM-10 Nonattainment Area Attainment Dates, Making Attainment Determinations and Reporting on Quantitative Milestones, from Sally L. Shaver, Director of Air Quality Strategies and Standards Division, to EPA Regional Air Division Directors (November 14, 1994), pp. 14-15), EPA believes it is appropriate to consider the time and expenditures necessary for FMC to comply with the requirements proposed in this FIP in determining the appropriate compliance period.

For those sources for which EPA believes additional controls are needed for compliance and for which FMC has agreed to

implement additional controls as part of the RCRA consent decree, EPA is proposing as the compliance dates in this FIP proposal the compliance dates established in the RCRA consent decree. EPA's major goal in negotiating the SEP projects in the RCRA consent decree was the same as EPA's goal in this FIP proposal: achieving reductions in PM-10 emissions at the FMC facility as expeditiously as practicable. The dates agreed to in the RCRA consent decree and proposed in this notice achieve that goal. EPA believes FMC's agreement to install the controls as SEPs as part of the RCRA consent decree has accelerated the date by which EPA could reasonably propose to require full compliance with the proposed FIP by at least two years. This is because FMC began implementing the SEP projects necessary for compliance with this FIP proposal before publication of this FIP proposal and long before final action will be taken on this FIP proposal. Because FMC has already begun to implement the control technology as part of the RCRA settlement, it is practicable for FMC to comply with the emission limitations and work practice requirements at a much earlier date. For example, FMC and EPA reached an agreement in principle as part of the RCRA settlement in May 1998 to have the hot pour slag ladling fully operational by November 1, 2000. This agreement was based on an understanding that, acting as expeditiously as practicable, it would take FMC 28 months to complete design and installation of the slag ladling and have the

system fully operational. Because FMC has already agreed to install slag ladling as part of the RCRA settlement, it is possible for FMC to comply with the proposed emission limits and related requirements as of November 1, 2000. Had FMC not already agreed to undertake the slag ladling as part of the RCRA settlement, it would have been reasonable for EPA to give 28 months from the effective date of final action on this FIP to comply with the slag ladling requirements.

Under this FIP proposal, the emission limitations and work practice requirements relating to the following sources will come into effect as follows:

1. Phosphorus loading dock, November 1, 1999.
2. Slag handling, November 1, 2000.
3. Calciners, December 1, 2000.
4. Secondary condenser flare and ground flare by January 1, 2001, although interim measures apply 60 days after the effective date of the proposed FIP.
5. Fugitive emissions from the furnace building, April 1, 2002.

If final action on the proposed FIP occurs after any of these dates, EPA proposes that the emission limitations and work practice requirements relating to the source in question become effective 60 days after the effective date of final action on the FIP.

With the compliance schedule proposed above, EPA anticipates that all proposed RACT-level requirements for the Fort Hall PM-10 nonattainment area will be in place and fully operational by April 1, 2002. Many of the new controls should be in place well before that time. EPA does not expect PM-10 values above the level of the revised PM-10 NAAQS to be recorded on the Tribal monitors after April 1, 2002. Because attainment of the PM-10 NAAQS requires three calendar years of clean data, the area may not be eligible for an attainment designation for the applicable PM-10 standards until after that date. Given the number and extent of the projects FMC will need to undertake to achieve compliance with the proposed FIP, as well as the amount of the necessary expenditures, however, EPA believes that the proposed FIP achieves implementation of RACT as expeditiously as practicable.

As stated above, in general, EPA is proposing that FMC comply with all monitoring, work practice, recordkeeping, and reporting requirements no later than 60 days after the effective date of final action on this proposal. An exception is for monitoring requirements that require installation of new equipment, such as a device for measuring pressure drop. In general, where EPA is requiring the installation and calibration of new monitoring equipment, EPA proposes that FMC have 180 days after the effective date of this FIP to comply. Because it will

take time for FMC to select, install, and test the required monitoring equipment, EPA believes that a 180-day period for compliance with these requirements is reasonable. EPA notes that this is the same time period allowed for installation of monitoring equipment in the New Source Performance Standards. See generally 40 CFR part 60.

I. Effectiveness of Proposed Control Measures

The proposed control strategy, as discussed above, establishes emission limitations and work practice requirements that will entail the installation of significant control technology affecting five sources of PM-10 at FMC. Table 5 below presents FMC emissions before and after implementation of the proposed control strategy and shows the overall percentage reduction achieved.

TABLE 5

Attainment Demonstration 24-Hour PM-10 Standard

FMC 1996 Actual Worst Case PM-10 Emissions Summary

Full Implementation of Proposed Control Strategy

Pounds/Day

Source Name	PM-10 Emissions Before Control	PM-10 Emissions After Control
POINT SOURCES		
Ground Flare	2281	114
Calciners	1204	301
Elevated Secondary CO Flare	828	41
All other Baghouses	446	446
Medusa Anderson (four furnaces)	269	269
Calciner Cooler Vents	188	188
Pressure Relief Vents	99	99
Cooling Tower	96	96
Phos Dock	34	34
Boilers	13	13
Emergency CO Flares	12	12
Subtotal Point Sources	5470	1613
PROCESS and OTHER FUGITIVES		
Slag Handling		
Slag tap	173	
Metal Tap	88	

Slag cooling	209	146	
Slag digging	173		
Loader to truck	270		
Truck to slag pile	135		
Slag handling subtotal	1045	146	
All Roads	190	190	
All Piles	163	163	
Dry fines material recycle	33	33	
Nodule fines handling truck loading	12	12	
Nodule fines stockpiling	7	7	
Subtotal Fugitives	1450	551	
Grand Total	6920	2164	69% reduction

TABLE 6

Attainment Demonstration

Annual PM-10 Standard

FMC 1996 Annual Emissions Summary

Full Implementation of Proposed Control Strategy

Tons/year

Source Name	PM-10 Emissions Before Control	PM-10 Emissions After Control
POINT SOURCES		
Ground Flare	197	10
Calciners	100	25
Elevated Secondary CO Flare	62	3
All other Baghouses	49	49
Medusa Anderson (four furnaces)	43	43
Calciner Cooler Vents	27	27
Pressure Relief Vents	1	1
Cooling Tower	18	18
Phos Dock	6	6
Boilers	2	2
Emergency CO Flares	0	0
Subtotal Point Sources	505	184
PROCESS and OTHER FUGITIVES		
Slag Handling		
Slag tap	28	

Metal Tap	14		
Slag cooling	33	23	
Slag digging	27		
Loader to truck	43		
Truck to slag pile	20		
slag handling subtotal	165	23	
All Roads	25	25	
All Piles	23	23	
Dry fines material recycle	6	6	
Nodule fines handling truck loading	2	2	
Nodule fines stockpiling	1	1	
Subtotal Fugitives	222	80	
Grand Total	727	264	64% reduction

The above tables reflect reductions in emissions from three sources as a result of this FIP proposal: slag handling (source 8), the calciner scrubbers (source 9), and the elevated secondary condenser and ground flares (source 26a). As discussed above, the improvements to the phos dock that FMC has agreed to undertake as part of the RCRA consent decree and the resulting emission limitations and work practice requirements proposed for the phos dock are designed to eliminate emissions due to “upset” conditions, which emissions were not included in the emission

inventory in the first place. In other words, the proposed improvements to the phos dock area and the proposed emission limitations for that source are designed to ensure emissions from that source do not exceed the level of emissions included in the emission inventory for the phos dock. Therefore, there is no emission reduction attributed to the phos dock Anderson scrubber as a result of this FIP proposal in Table 5 “Attainment Demonstration for 24-hour PM-10 NAAQS” or Table 6 “Attainment Demonstration for the Annual PM-10 NAAQS”. The same is true for the furnace building, although some of the anticipated emission reductions from this source are reflected under the category “slag handling.”

EPA anticipates that the emission limitations and work practice requirements proposed in this FIP, when considered together, will result in an overall reduction in daily worst case emissions of 69% from the levels contained in the emission inventory.

EPA believes that the emission limitations and work practice requirements, and the related monitoring, recordkeeping, and reporting requirements will result in attainment of the pre-existing 24-hour PM-10 NAAQS and annual PM-10 NAAQS as expeditiously as practicable. As discussed above, measured ambient air quality serves as the basis for determining the level of control necessary to attain the standard. Attainment of the

annual standard requires that the expected annual PM-10 concentration be less than or equal to the level of the annual NAAQS. Attainment of the pre-existing 24-hour standard requires that the expected number of exceedences of the NAAQS be less than or equal to one per year. Conceptually, determining the PM-10 concentration for a particular site that must be reduced to the level of the NAAQS, thereby assuring attainment, is known as determining the "design value." The design value is then used to determine the level of control needed.

There are several recommended methods for determining the design concentration as specified in the PM-10 SIP Development Guideline (EPA-460 2-86-001, June 1987). For purposes of this proposed FIP, EPA used the log-normal graphical estimation method, with air quality data collected from October 8, 1996 through March 1997 at all three Tribal monitors. The highest 24-hour design value estimated for any site was for the primary site, at 433 ug/m3. EPA therefore concluded that, in order for the Fort Hall PM-10 nonattainment area to attain the 24-hour PM-10 standard, the second highest PM-10 concentration must be reduced from 433 ug/m3 to 150 ug/m3, a reduction of 65%. The second highest PM-10 level is used because the PM-10 NAAQS allows, over a three-year period, on average, one exceedence per year.

As discussed above, because the annual PM-10 NAAQS is based

on a three-year average, there is insufficient monitoring data from the Tribal monitors to document a violation of the pre-existing annual PM-10 NAAQS. The only calendar year for which there is complete data available in order to estimate the annual design value is 1997. The highest annual average PM-10 concentration for 1997, 66.3 ug/m3, was recorded at the primary site. In order to attain the annual standard, this value would need to be reduced to 50 ug/m3, a reduction of 16.3 ug/m3 or 25%.

EPA believes the control strategy proposed in this notice will achieve a 69% reduction of daily worst case PM-10 emissions from FMC on a facility-wide basis. The sources for which EPA believes emission reductions will be necessary to meet the proposed emission limitations--slag handling, the calciner scrubbers, the furnace building, the phos dock, and the elevated secondary condenser and ground flares--are not seasonal in nature. Emissions from these sources remain relatively constant throughout the year. Thus, EPA expects that the emission reductions will occur throughout the year and will produce sufficient reductions in annual emissions to achieve the annual standard. Table 6 above shows the 64% reduction in annual emission that are expected from implementation of the control strategy. In short, EPA believes that, so long as the proposed control strategy achieves an overall emission reduction from the FMC facility of 69%, the proposed control strategy should result

in attainment of the pre-existing 24-hour and annual PM-10 standards.

As discussed above, EPA promulgated revised PM-10 standards on July 18, 1997. See 62 FR 38651. Although the levels of the 24-hour and annual standards remain unchanged, there has been a change in the statistical form for determining compliance with the 24-hour NAAQS (from an expected exceedence rate to averaging the 99th percentile concentration from three years of data) and a change in the procedures for reporting PM-10 concentrations at reference conditions to PM-10 concentrations at local temperature and pressure. After converting previously reported PM-10 concentrations to local temperature and pressure and calculating the 99th percentile of the data base for each site and the arithmetic mean for each site for each year, EPA believes that the control strategy for attaining the pre-existing PM-10 NAAQS (as provided for in this proposed notice) will be sufficient to attain and maintain the revised 24-hour and annual PM-10

J. EPA's Plan for Addressing other PM-10 Planning Issues

The following section contains a brief discussion of the other planning requirements applicable to states with moderate PM-10 nonattainment areas under the pre-existing PM-10 NAAQS. EPA will address these other PM-10 planning requirements that apply to states with PM-10 nonattainment areas subject to the pre-existing PM-10 NAAQS as necessary or appropriate in future

rulemaking proposals following final promulgation of the section 172(e) rulemaking.

1. PM-10 Precursors

As stated above, under CAA section 189(e), the control requirements applicable under SIPs to major stationary sources of PM-10 must also be applied to major stationary sources of PM-10 precursors, unless EPA determines such sources do not contribute significantly to PM-10 levels in excess of the NAAQS in the area. “Significantly” is not defined in either the Act or in the General Preamble. Rather, EPA has indicated that for moderate areas, the determination should be made on a case-by-case basis. 57 FR at 13539.

As discussed above, it is unclear whether PM-10 precursors contribute significantly to the PM-10 exceedences that have been recorded on the Tribal monitors. EPA expects to have the information necessary to make that determination by the summer of 1999.

EPA is aware that the Shoshone-Bannock Tribes and citizens in the Fort Hall PM-10 nonattainment area believe that PM-10 precursors contribute to air quality problems in the area and should be addressed. In general EPA shares this concern over these very small particulates. On July 18, 1997, EPA promulgated new, more stringent, air quality standards for PM-2.5. These standards were promulgated to address the serious health effects

associated with these very small particles, of which PM-10 precursors make up a significant fraction. EPA, the State, and the Tribes are just now in the process of establishing PM-2.5 air monitoring stations in the Pocatello and Fort Hall areas to better define and characterize the nature and extent of the fine particulate air quality problem near Pocatello and Fort Hall. Even if EPA later determines, based on the ongoing analysis of the filters from the Tribal monitors, that PM-10 precursors do not need to be addressed for the Fort Hall PM-10 nonattainment area in the context of the revised PM-10 planning process, EPA believes it is likely that particulate precursors will need to be addressed in the area under the new PM-2.5 standard.

2. Quantitative Milestones

For plan revisions demonstrating attainment of the PM-10 NAAQS, States are required to include in moderate PM-10 state implementation plans quantitative milestones which are to be achieved every three years and which demonstrate reasonable further progress (RFP), as defined in section 171(l), toward attainment by the applicable attainment date. See CAA section 189(c). Section 172(c)(2) of the Act also states that nonattainment plans shall require RFP. RFP is defined in section 171(1) as “such annual incremental reductions in emissions of the relevant air pollutant as are required by this part [D] or may reasonably be required by [EPA] for the purpose of ensuring

attainment of the applicable [NAAQS] by the applicable date."

3. New Source Review

States with moderate and serious PM-10 nonattainment areas are required to implement a permit program for the construction and operation of new and modified major stationary sources of PM-10. See CAA section 189(a).

4. Contingency Measures

States with moderate PM-10 nonattainment areas are required to include in their state implementation plans contingency measures that become effective without further action by EPA upon a determination that the area has failed to achieve reasonable further progress or to attain the PM-10 NAAQS by the attainment date. See CAA section 172(c)(9).

IV. Request for Public Comment

EPA is soliciting public comment on all aspects of this proposed FIP. Interested parties should submit comments in triplicate, to the address listed in the front of this Notice. Public comments postmarked by [**Insert date 90 days from date of publication or April 19, 1999, whichever is later**] will be considered in the final action taken by EPA.

V. Administrative Requirements

A. Executive Order (E.O.) 12866

Under Executive Order 12866, 58 FR 51735 (October 4, 1993), all "regulatory actions" that are "significant" are subject to

Office of Management and Budget (OMB) review and the requirements of the Executive Order. A "regulatory action" is defined as "any substantive action by an agency (normally published in the Federal Register) that promulgates or is expected to result in the promulgation of a final rule or regulation, including... notices of proposed rulemaking." A "regulation or rule" is defined as "an agency statement of general applicability and future effect,...."

The proposed FIP is not subject to OMB review under E.O. 12866 because it applies to only to a single, specifically named facility and is therefore not a rule of general applicability. Thus, it is not a "regulatory action" under E.O. 12866.

B. Regulatory Flexibility Analysis (RFA)

Under the Regulatory Flexibility Act, 5 U.S.C. section 601 et seq., EPA generally must prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements unless EPA certifies that the rule will not have a significant economic impact on a substantial number of small entities. 5 U.S.C. §§ 603, 604 and 605(b).

"Small entities" include small businesses, small not-for-profit enterprises, and small governments. The proposed FIP only affects one plant, which is classified in SIC Code 2819. The Small Business Administration definition of "small business" for this SIC code is less than 1,000 employees. Because FMC has

more than 1,000 employees, it is not a small entity under the RFA. Therefore, pursuant to 5 U.S.C. section 605(b), I certify that the proposed FIP will not have a significant economic impact on a substantial number of small entities.

C. Unfunded Mandates Reform Act (UMRA)

Title II of the Unfunded Mandates Reform Act of 1995, P.L. 04-4, 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 UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed rules and for final rules for which EPA published a notice of proposed rulemaking, if those rules contain "federal mandates" that may result in the expenditure by state, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any one year. If section 202 requires a written statement, section 205 of UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives. Under section 205, EPA must adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule, unless the Administrator publishes with the final rule an explanation why EPA did not adopt that alternative. The provisions of section 205 do not apply when they are inconsistent with applicable law. Section 204 of UMRA

requires EPA to develop a process to allow elected officers of state, local, and tribal governments (or their designated, authorized employees), to provide meaningful and timely input in the development of EPA regulatory proposals containing significant Federal intergovernmental mandates.

EPA has determined that the proposed FIP contains no federal mandates on state, local or tribal governments, because it will not impose any enforceable duties on any of these entities. EPA further has determined that the proposed FIP is not likely to result in the expenditure of $100 million or more by the private sector in any one year. Although the proposed FIP would impose enforceable duties on an entity in the private sector, the costs are expected to be less than $50 million. Consequently, sections 202, 204, and 205 of UMRA do not apply to the proposed FIP.

Before EPA establishes any regulatory requirements that might significantly or uniquely affect small governments, it must have developed under section 203 of 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.

EPA has determined that the proposed FIP will not significantly or uniquely affect small governments, because it imposes no requirements on small governments. Therefore, the requirements of section 203 do not apply to the proposed FIP. Nonetheless, as discussed in Section I.D. above, EPA worked closely with representatives of the Tribes, the City of Pocatello, the City of Chubbuck, and representatives of other small governments in the area during the development of today's proposed action. In particular, since the early 1990s, EPA has worked closely with the Air Quality Program of the Tribes and representatives of the Fort Hall Business Council in developing the proposed FIP.

D. Paperwork Reduction Act

Under the Paperwork Reduction Act, 44 U.S.C. 3501 et seq., OMB must approve all “collections of information” by EPA. The Act defines “collection of information” as a requirement for “answers to . . . identical reporting or recordkeeping requirements imposed on ten or more persons . . . .” 44 U.S.C. 3502(3)(A). Because the proposed FIP only applies to one company, the Paperwork Reduction Act does not apply.

E. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks

This executive order applies to any rule that: (1) is determined to be “economically significant” as that term is

defined in 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.

EPA interprets E.O. 13045 as applying only to those regulatory actions that are based on health or safety risks, such that the analysis required under section 5-501 of the Order has the potential to influence the regulation. The FMC FIP is not subject to E.O. 13045 because it implements a previously promulgated health or safety-based federal standard.

F. Executive Order 12875: Enhancing the Intergovernmental Partnership

Under Executive Order 12875, EPA 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 EPA complies by consulting, Executive Order 12875 requires EPA to provide to the Office of Management and Budget a description of the extent of EPA's prior consultation with

representatives of affected State, local and tribal governments, the nature of their concerns, any written communications from the governments, and EPA's position 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."

As stated above, the proposed FIP will not create a mandate on state, local or tribal governments because it will not impose any enforceable duties on these entities. Accordingly, the requirements of section 1(a) of Executive Order 12875 do not apply to this rule. Nonetheless, as discussed in Section I.D. above, EPA worked closely with representatives of the Tribes during the development of today's proposed action. In particular, since the early 1990s, EPA has worked closely with the Air Quality Program of the Tribes and representatives of the Fort Hall Business Council in developing the proposed FIP.

G. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments

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 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.”

The proposed FIP does not impose substantial direct compliance costs on the communities of Indian tribal governments. The proposed FIP imposes obligations only on the owner or operator of FMC. Accordingly, the requirements of section 3(b) of Executive Order 13084 do not apply to this rule.

As discussed in Section I.D. above, EPA worked closely with representatives of the Tribes during the development of today's proposed action. In particular, since the early 1990s, EPA has worked closely with the Air Quality Program of the Tribes and representatives of the Fort Hall Business Council in developing

the proposed FIP.

H. National Technology Transfer and Advancement Act of 1995 (NTTAA)

Section 12(d) of NTTAA, Pub. L. No. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in its regulatory activities unless to do so would be inconsistent with applicable law or otherwise impractical. Voluntary consensus standards are technical standards (e.g., materials specifications, test methods, sampling procedures, business practices) that are developed or adopted by voluntary consensus standards bodies. The NTTAA directs EPA to provide Congress, through OMB, explanations when the Agency decides not to use available and applicable voluntary standards.

The proposed reference test methods for the emissions limitations and work practice requirements in this FIP proposal are technical standards. EPA is proposing a voluntary consensus standard, ASTM D2216-92, Standard Test Method for Laboratory Determination of Water (Moisture) Content of Soil and Rock, as the reference test method for determining compliance with the moisture content requirement for the main shale pile and the emergency/contingency raw ore shale pile. This standard was developed by the American Society for Testing and Materials (ASTM). ASTM standards are published in the Annual Book of ASTM Standards (a multiple volume set) and are available at major

libraries.

With respect to the other emission limitations and work practice requirements proposed in this notice, EPA is proposing as the reference test methods test methods that have been promulgated by EPA. See Methods 201, 201A, and 202, 40 CFR part 51, appendix M; Methods 1, 2, 2C, 2D, 3, 3A, 4, 5, and 22 (in part), 40 CFR part 60, appendix A. Before proposing these reference test methods, EPA conducted a search to identify potentially applicable voluntary consensus standards. EPA did not identify any potentially applicable standards that could be used in place of Methods 201, 201A, and 202, 40 CFR part 51, appendix M; or Methods 1, 3, 3A, 4, 5, and 22 (in part), 40 CFR part 60, appendix A. Therefore, EPA proposes to use those test methods as the reference test methods for this FIP proposal.

EPA did identify ASTM D3464-96, Standard Test Method for Average Velocity in a Duct Using a Thermal Anemometer, as being potentially applicable for determining gas velocity and volumetric flow rate, as do EPA Methods 2, 2C, 2D. EPA does not propose to use this ASTM method in this FIP proposal, however, because the use of this voluntary consensus standard would be impractical. ASTM D3464-96 is intended for determining air velocities in HVAC ducts, fume hoods, vent stacks of nuclear power stations and in performing model studies of pollution control devices. By its terms, application of this ASTM standard

is limited to certain temperature, moisture, and contaminant loading conditions which can not always be met for the proposed monitoring applications at the FMC facility. Therefore, use of ASTM D3436-96 is impractical for purposes of this proposed FIP.

EPA welcomes comments on this aspect of the proposed FIP and, specifically, invites the public to identify potentially-applicable voluntary consensus standards and to explain why such standards should be used in this regulation.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Intergovernmental relations, Particulates matter, Reporting and recordkeeping requirements.

Dated: January 29, 1999.

Carol Browner,
Administrator.

40 CFR part 52 is proposed to be amended as follows:

PART 52–APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS

1. The authority citation for part 52 continues to read as follows:

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

Subpart N–Idaho

2. Subpart N is proposed to be amended by adding § 52.676 to read as follows:

§52.676 Control Strategy: Fort Hall PM-10 Nonattainment Area, Fort Hall Indian Reservation, Idaho.

(a) *Applicability.* This regulation applies to the owner or operator of the FMC Corporation’s elemental phosphorus facility located on the Fort Hall Indian Reservation in Idaho, including any new owner or operator in the event of a change in ownership of the FMC facility.

(b) *Definitions.* The following definitions apply to this section. Except as specifically defined herein, terms used in this section

retain the meaning accorded them under the Clean Air Act.

Bag leak detection guidance means Office of Air Quality Planning and Standards (OAQPS): Fabric Filter Bag Leak Detection Guidance, EPA 454/R-98-015 (Sept. 1997)

Certified observer means a visual emissions observer who has been properly certified using the initial certification and periodic semi-annual recertification procedures of 40 CFR part 60, appendix A, Method 9.

Emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control of the owner or operator of the FMC facility, including acts of God, which requires immediate corrective action to restore normal operation. An emergency shall not include events caused by improperly designed equipment, lack of preventative maintenance, careless or improper operation, or operator error.

Emission limitation and *emission standard* mean a requirement which limits the quantity, rate, or concentration of emissions

of air pollutants on a continuous basis, including any requirements which limit the level of opacity, prescribe equipment, set fuel specifications, or prescribe operations or maintenance procedures to assure continuous emission reduction.

EPA means United States Environmental Protection Agency, Region 10.

Excess emissions means emissions of an air pollutant in excess of an emission limitation.

Excursion means a departure from a parameter range approved under paragraphs (e)(3) or (g)(1) of this section.

FMC or FMC facility means all of the pollutant-emitting activities that comprise the elemental phosphorus plant owned by or under the common control of FMC Corporation in Township 6 south, Range 33 east, Sections 12 and 13, and that lie within the exterior boundaries of the Fort Hall Indian Reservation, in Idaho, including, without limitation, all buildings, structures, facilities, installations, material handling areas, storage piles, roads, staging areas, parking lots, mechanical processes and related areas, and other processes and related areas. For purposes of this section, the term “FMC” or “FMC facility” shall not include pollutant

emitting activities located on lands outside the exterior boundaries of the Fort Hall Indian Reservation.

Fugitive emissions means those emissions which could not reasonably pass through a stack, chimney, vent, or other functionally equivalent opening. For the purposes of determining compliance with the opacity limitations that apply to fugitive sources only, fugitive emissions includes all emissions which do not actually pass through a stack, chimney, vent, or other functionally equivalent opening for which an opacity standard is established in this rule.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, process equipment, or a process to operate in a normal or unusual manner. Failures that are caused by poor maintenance or careless operation are not malfunctions.

Method 5 is the reference test method described in 40 CFR part 60, appendix A, conducted in accordance with the requirements of this section.

Method 9 is the reference test method described in 40 CFR part 60, appendix A.

Methods 201, 201A, and 202 are the reference test methods described in 40 CFR part 51, appendix M, conducted in accordance with the requirements of this section.

Mini-flush means the process of flushing elemental phosphorus, which has solidified in the secondary condenser, to the elevated secondary condenser flare or to the ground flare, and thus into the atmosphere.

Monitoring malfunction means any sudden, infrequent, not reasonably preventable failure of the monitoring to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not monitoring malfunctions.

Opacity means the degree to which emissions reduce the transmission of light and obscure the view of an object in the background.

Owner or operator means any person who owns, leases, operates, controls, or supervises the FMC facility or any portion thereof.

Particulate matter means any airborne finely-divided solid or liquid material with an aerodynamic diameter smaller than 100 micrometers.

PM-10 or PM-10 emissions means finely divided solid or liquid material, with an aerodynamic diameter less than or equal to a nominal ten micrometers emitted to the ambient air as measured by an applicable reference method such as Method 201, 201A, or 202, or an equivalent or alternative method specifically approved by the Regional Administrator

Regional Administrator means the Regional Administrator, EPA Region 10, or a duly designated representative of the Regional Administrator.

Road means any portion of the FMC facility upon which a motorized vehicle has reasonable access for movement or for which there is visible evidence of previous vehicle access (e.g., visible wheel tracks).

Scheduled maintenance means planned upkeep, repair activities, and preventative maintenance on any source, including the shutdown and startup of such equipment.

Shutdown means the cessation of operation of a source for any purpose.

Source means any building, structure, facility, installation, material handling area, storage pile, road, staging area, parking lot, mechanical process or related area, or other process or related area which emits or may emit particulate matter.

Slag pit area means within 100 yards of the furnace building at the FMC facility.

Startup means the setting in operation of a source for any purpose.

Title V permit means an operating permit issued under 40 CFR part 70 or 71.

Tribes means the Shoshone-Bannock Tribes.

Visible emissions means the emission of pollutants into the atmosphere, excluding uncombined condensed water vapor (steam) that is observable by the naked eye.

Visual observation means the continuous observation of a source for the presence of visible emissions for a period of ten consecutive minutes conducted in accordance with section 5 of EPA Method 22, 40 CFR part 60, appendix A, by a person who meets the training guidelines described in section 1 of Method 22.

(c) *Emission limitations and work practice requirements.*

(1) Except as otherwise provided in paragraph (c)(2) of this section, there shall be no visible emissions from any location at the FMC facility at any time, as determined by a visual observation.

(2) For each source identified in Column II of Table 1 of this section, the owner or operator of the FMC facility shall comply with the emission limitations and work practice requirements established in Column III of Table 1 of this section for that source.

(3) The opacity limits for the following fugitive emission

sources, which are also identified in Column II of Table 1 of this seciton, apply to adding of material to, taking of material from, reforming, or otherwise disturbing the pile: main shale pile (source 2), emergency/contingency raw ore shale pile (source 3), stacker and reclaimer (source 4), recycle material pile (source 8b), nodule pile (source 11), nodule fines pile (source 13), and screened shale fines pile (source 14).

(4) (i) Except as provided in paragraph (c)(4)(ii) of this section, beginning November 1, 2000, the following activities shall be prohibited:

(A) The discharge of molten slag from furnaces or slag runners onto the ground, pit floors (whether dressed with crushed slag or not), or other non-mobile permanent surface.

(B) The digging of solid slag in the slag pit area or the loading of slag into transport trucks in the slag pit area.

(ii) The prohibition set forth in paragraph (c)(4)(i) of this section shall not apply to the lining of slag pots and the handling (including but not limited to loading, crushing, or digging) of cold slag for purposes of the lining of slag pots.

(5) (i) Beginning January 1, 2001, no furnace gas shall be

burned in the elevated secondary condenser flare or the ground flare (source 26a).

(ii) Until December 31, 2000, the owner or operator of the FMC facility shall take the following measures to reduce PM-10 emissions from mini-flushes and to ensure there is no bias toward conducting mini-flushes during night-time hours.

(A) Mini-flushes shall be limited to no more than 50 minutes per day (based on a monthly average) beginning January 1, 1999. Failure to meet this limit for any given calendar month will be construed as a separate violation for each day during that month that mini-flushes lasted more than 50 minutes. The monthly average for any calendar month shall be calculated by summing the duration (in actual minutes) of each mini-flush during that month and dividing by the number of days in that month.

(B)(1) No mini-flush shall be conducted at any time unless one of the following operating parameters is satisfied:

(i) The flow rate of recirculated phossy water is equal to or less than 1800 gallons per minute; or

(ii) The secondary condenser outlet temperature is equal to or greater than 36 degrees Centigrade.

(2) The prohibition set for in paragraph (c)(4)(ii)(B) of this section shall not apply during periods of malfunction, provided the owner or operator of the FMC facility provides to EPA written notice of a malfunction within 24 hours of occurrence and takes all reasonable precautions to minimize the duration and extent of emissions during such malfunction. The owner or operator of the FMC facility shall have the burden of proving the existence of a malfunction. The owner or operator of the FMC facility shall maintain properly signed contemporaneous records documenting the date, time, and duration of the malfunction; the probable cause of the malfunction; and any corrective action or preventative measures taken.

(6) At all times, including periods of startup, shutdown, malfunction, or emergency, the owner or operator of the FMC facility shall, to the extent practicable, maintain and operate each source identified in Column II of Table 1 of this section, including associated air pollution control equipment, in a manner consistent with good air pollution control

practices for minimizing emissions. Determination of whether acceptable operating and maintenance procedures are being used will be based on information available to the Regional Administrator which may include, but is not limited to, monitoring results, opacity observations, review of operating and maintenance procedures, and inspection of the source.

(7) Maintaining operation of a source within approved parameter ranges, promptly taking corrective action, and otherwise following the work practice, monitoring, recordkeeping, and reporting requirements of this section do not relieve the owner or operator of the FMC facility from the obligation to comply with applicable emission limitations and work practice requirements at all times.

Alternative 1 for paragraph (c)(8):

(8) An affirmative defense to a penalty action brought for noncompliance with an emission limitation shall be available if the excess emissions were due to startup, shutdown, or scheduled maintenance and all of the following conditions are met:

(i) The owner or operator of the FMC facility notifies EPA in writing of any startup, shutdown, or scheduled maintenance that is expected to cause excess emissions. The notification shall be given as soon as possible, but no later than 48 hours prior to the start of the startup, shutdown, or scheduled maintenance, unless the owner or

operator demonstrates to EPA's satisfaction that a shorter advanced notice was necessary. The notice shall identify the expected date, time, and duration of the excess emissions event, the source involved in the excess emissions event, and the type of excess emissions event.

(ii) The affirmative defense for excess emissions due to startup, shutdown, or scheduled maintenance shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(A) The excess emissions could not have been avoided through careful and prudent planning, design, and operations and maintenance practices.

(B) The source in question and any related control equipment and processes were at all times maintained and operated in a manner consistent with good practices for minimizing emissions.

(C) During the period of the startup, shutdown, or scheduled maintenance, the owner or operator of the FMC facility took all reasonable steps to minimize levels of emissions that exceeded the emission limitations or other requirements of this section.

(D) During the period of the startup, shutdown, or scheduled maintenance, the owner or operator of the FMC facility took all reasonable steps to minimize

the impact of the excess emissions on the ambient air.

(E) The owner or operator of the FMC facility submitted notice of the startup, shutdown, or scheduled maintenance to EPA within 48 hours of the time when emission limitations were exceeded due to startup, shutdown, or scheduled maintenance. This notice fulfills the requirement of paragraph (g)(4) of this section. This notice must contain a description of the startup, shutdown, or scheduled maintenance, any steps taken to mitigate emissions, and corrective actions taken.

(iii) No exceedence of the 24-hour PM-10 National Ambient Air Quality Standard, 40 CFR 50.7(a)(2)(1998) was recorded on any monitor located within the Fort Hall PM-10 nonattainment area that regularly reports information to the Aerometric Information Retrieval System-Air Quality Subsystem, as defined under 40 CFR 58.1(p), on any day for which the defense of startup, shutdown, or scheduled maintenance is asserted.

(iv) In any enforcement proceeding, the owner or operator of the FMC facility has the burden of proof on all requirements of this paragraph (c)(8).

Alternative 2 for paragraph (c)(8):

(8) An affirmative defense to a penalty action brought for noncompliance with an emission limitation shall be available if the excess emissions were due to an emergency and all of the following conditions are met:

(i) The affirmative defense of emergency shall be demonstrated through properly signed, contemporaneous operating logs, or other relevant evidence that:

(A) An emergency occurred and that the owner or operator of the FMC facility can identify the causes of the emergency.

(B) The FMC facility was at the time being properly operated.

(C) During the period of the emergency the owner or operator of the FMC facility took all reasonable steps to minimize levels of emissions that exceeded the emission limitation or other requirements of this section.

(D) The owner or operator of the FMC facility submitted notice of the emergency to EPA within 48 hours of the time when emission limitations were exceeded due to the emergency. This notice fulfills the requirement of paragraph (g)(4)of this section. This notice must contain a description of the

emergency, any steps taken to mitigate emissions, and corrective actions taken.

(ii) No exceedence of the 24-hour PM-10 National Ambient Air Quality Standard, 40 CFR 50.7(a)(2)(1998), was recorded on any monitor located within the Fort Hall PM-10 nonattainment area that regularly reports information to the Aerometric Information Retrieval System-Air Quality Subsystem, as defined under 40 CFR 58.1(p), on any day for which the defense of emergency is asserted.

(iii) In any enforcement proceeding, the owner or operator of the FMC facility has the burden of proof on all requirements of this paragraph (c)(9).

(d) *Reference test methods.*

(1) For each source identified in Column II of Table 1 of this section, the reference test method for the corresponding emission limitation in Column III of Table 1 of this section for that source is identified in Column IV of Table 1 of this section.

(2) When Methods 201/201A and 202 are specified as the reference test methods, the testing shall be conducted in accordance with the identified test methods and the following additional requirements:

(i) Each test shall consist of three runs, with each run

a minimum of one hour.

(ii) Method 202 shall be run concurrently with Method 201 or Method 201A.

(iii) The source shall be operated at a capacity of at least 90% of maximum during all tests, unless the Regional Administrator determines in writing that other operating conditions are representative of normal operations.

(iv) Only regular operating staff may adjust the processes or emission control device parameters during a performance test or within two hours prior to the tests. Any operating adjustments made during a performance test, which are a result of consultation during the tests with source testing personnel, equipment vendors, or other consultants may render the source test invalid.

(v) For all reference tests, the sampling site and minimum number of sampling points shall be selected according to EPA Method 1 (40 CFR part 60, appendix A).

(vi) EPA Methods 2, 2C, 2D, 3, 3A, and 4 (40 CFR part 60, appendix A) shall be used, as appropriate, for determining mass emission rates.

(vii) The mass emission rate of PM-10 shall be determined by first adding the PM-10 concentrations from Methods 201/201A and 202, and then multiplying by the average

hourly volumetric flow rate for the run. The average of the three required runs shall be compared to the emission standard for purposes of determining compliance.

(viii) Source testing of the Medusa Andersen stacks on the furnace building (sources 18d, 18e, 18f, and 18g) shall be conducted during slag tapping.

(ix) Source testing of the excess CO burner (source 26b) shall be conducted during either a mini-flush or hot-flush.

(3) Method 5 shall be used in place of Method 201 or 201A for the calciner scrubbers (source 9) and any other sources with entrained water drops. In such case, all the particulate matter measured by Method 5 must be counted as PM-10, and the testing shall be conducted in accordance with paragraph (d)(2) of this section.

(4) Method 5 may be used as an alternative to Method 201 or 201A for a particular point source, provided that all of the particulate measured by Method 5 is counted as PM-10 and the testing is conducted in accordance with paragraph (d)(2) of this section.

(5) Method 202 shall not be required for a particular source provided that:

(i) The owner or operator of the FMC facility submits a written request to the Regional Administrator which

demonstrates that the contribution of condensible particulate matter to total PM-10 emissions is insignificant for such source; and

(ii) The Regional Administrator approves the request in writing.

(6) For the purpose of submitting compliance certifications or establishing whether or not a person has violated or is in violation of any requirement of this section, nothing in this section shall preclude the use, including the exclusive use, of any credible evidence or information relevant to whether a source would have been in compliance with applicable requirements if the appropriate performance or reference test or procedure had been performed.

(e) *Monitoring and additional work practice requirements.*

(1) The owner or operator of the FMC facility shall conduct a performance test to measure PM-10 emissions from each of the following sources on an annual basis using the specified reference test methods: east shale baghouse (source 5a), middle shale baghouse (source 6a), west shale baghouse (source 7a), calciner scrubbers (source 9), calciner cooler vents (source 10), north nodule discharge baghouse (source 12a), south nodule discharge baghouse (source 12b), proportioning building-east nodule baghouse (source 15a), proportioning building-west nodule baghouse (source 15b), nodule reclaim

baghouse (source 16a), dust silo baghouse (source 17a), furnace building-east baghouse (source 18a), furnace building-west baghouse (source 18b), furnace #1, #2, #3 and #4–Medusa Andersen scrubbers (sources 18d, 18e, 18f and 18g), coke handling baghouse (source 20a), phos dock–Andersen scrubber (source 21a), and excess CO burner (source 26b).

(i) The first annual test for each source shall be completed within 12 months of the effective date of this section, except that the first annual test for the calciner scrubbers (source 9), the phos dock Andersen scrubber (source 21a), and the excess CO burner (source 26b) shall be conducted within 60 days after the date on which the PM-10 emission limitations become applicable to those sources. Subsequent annual tests shall be completed within 12 months of the most recent previous test.

(ii) The owner or operator of the FMC facility shall provide the Regional Administrator a proposed test plan at least 30 days in advance of each scheduled source test.

(iii) Concurrently with the performance testing and for at least two hours prior to and two hours following the test, the owner or operator of the FMC facility shall monitor and record the parameters specified in paragraphs (e)(2), (e)(3), (e)(4), and (e)(5) of this section, as

appropriate, for the source being tested, and shall report the results to EPA as part of the performance test report referred to in paragraph (g)(3)(i)(E) of this section.

(iv) The owner or operator of the FMC facility shall conduct a 12 minute visible emission observation using Method 9 at least twice during the performance test at an interval of no less than one hour apart, and shall report the results of this observation to EPA as part of the performance test report referred to in paragraph (g)(3)(i)(E) of this section.

(v) Concurrently with the performance testing, the owner or operator of the FMC facility shall measure the flow rate (throughput to the control device) using Method 2 for the calciner scrubbers (source 9) and the phos dock Andersen scrubber (source 21a) and shall report the results to EPA as part of the performance test report referred to in paragraph (g)(3)(i)(E) of this section.

(2) The owner or operator of the FMC facility shall install, calibrate, maintain, and operate in accordance with the manufacturer's specifications a device to continuously measure and continuously record the pressure drop across the baghouse for each of the following sources identified in Column II of Table 1 of this section: east shale baghouse (source 5a),

middle shale baghouse (source 6a), west shale baghouse (source 7a), north nodule discharge baghouse (source 12a), south nodule discharge baghouse (source 12b), proportioning building-east nodule baghouse (source 15a), proportioning building-west nodule baghouse (source 15b), nodule reclaim baghouse (source 16a), dust silo baghouse (source 17a), furnace building-east baghouse (source 18a), furnace building-west baghouse (source 18b), and coke handling baghouse (source 20a).

(i) The devices shall be installed and fully operational no later than 180 days after the effective date of this rule.

(ii) Upon EPA approval of the acceptable range of baghouse pressure drop for each source, as provided in paragraph (g)(1) of this section, the owner or operator of the FMC facility shall maintain and operate the source to stay within the approved range. Until EPA approval of the acceptable range of baghouse pressure drop for each source, the owner or operator of the FMC facility shall maintain and operate the source to stay within the proposed range for that source, as provided in paragraph (g)(1) of this section.

(iii) If an excursion from an approved range occurs, the owner or operator of the FMC facility shall immediately

upon discovery, but no later than within three hours of discovery, initiate corrective action to bring source operation back within the approved range.

(iv) The owner or operator of the FMC facility shall complete the corrective action as expeditiously as possible.

(3) The owner or operator of the FMC facility shall install, calibrate, maintain, and operate in accordance with the manufacture’s specifications and the bag leak detection guidance a triboelectric monitor to continuously monitor and record the readout of the instrument response for each of the following sources identified in Column II of Table 1 of this section: east shale baghouse (source 5a), middle shale baghouse (source 6a), west shale baghouse (source 7a), north nodule discharge baghouse (source 12a), south nodule discharge baghouse (source 12b), proportioning building-east nodule baghouse (source 15a), proportioning building-west nodule baghouse (source 15b), nodule reclaim baghouse (source 16a), dust silo baghouse (source 17a), furnace building-east baghouse (source 18a), furnace building-west baghouse (source 18b), and coke handling baghouse (source 20a).

(i) The triboelectric monitors shall be installed and fully operational no later than 180 days after the effective date of this rule.

(ii) The owner or operator of the FMC facility shall maintain and operate the source to stay within the approved range. For the triboelectric monitors, the “approved range” shall be defined as operating the source so that an “alarm,” as defined in and as determined in accordance with the bag leak detection guidance, does not occur.

(iii) If an excursion from an approved range occurs, the owner or operator of the FMC facility shall immediately upon discovery, but no later than within three hours of discovery, initiate corrective action to bring source operation back within the approved range.

(iv) The owner or operator of the FMC facility shall complete the corrective action as expeditiously as possible.

(4) The owner or operator of the FMC facility shall install, calibrate, maintain, and operate in accordance with the manufacturer’s specifications, a device to continuously measure and continuously record the pressure drop across the scrubber, the scrubber liquor flowrate, and scrubber liquor pH for each of the following sources identified in Column II of Table 1 of this section: calciner scrubbers (source 9) and furnaces #1, #2, #3 and #4-Medusa Andersen scrubbers (sources 18d, 18e, 18f and 18g). Scrubber liquor pH shall be measured

just prior to the point of addition of makeup water and/or caustic addition.

(i) The devices for the calciner scrubbers (source 9) shall be installed and fully operational on or before December 1, 2000. The devices for the Medusa Andersen scrubbers on furnaces #1, #2, #3 and #4 (sources 18d, 18e, 18f, and 18g) shall be installed and fully operational no later than 180 days after the effective date of this rule.

(ii) Upon EPA approval of the acceptable range of pressure drop, scrubber liquor flow rate, and scrubber liquor pH for each source, as provided in paragraph (g)(1) of this section, the owner or operator of the FMC facility shall maintain and operate the source to stay within the approved range. Until EPA approval of the acceptable ranges for each source, the owner or operator of the FMC facility shall maintain and operate the source to stay within the proposed range for that source, as provided in paragraph (g)(1) of this section.

(iii) If an excursion from an approved range occurs, FMC shall immediately upon discovery, but no later than within three hours of discovery, initiate corrective action to bring source operation back within the approved range.

(iv) The owner or operator of the FMC facility shall complete the corrective action as expeditiously as possible.

(5) The owner or operator of the FMC facility shall install, calibrate, maintain, and operate in accordance with the manufacturer's specifications, a device to continuously measure and continuously record the pressure drop across the scrubber for each of the following sources identified in Column II of Table 1 of this section: phos dock Andersen scrubber (source 21a) and excess CO burner(source 26b).

(i) The device for the phos dock Andersen scrubber (source 21a) shall be installed and fully operational on or before November 1, 1999. The device for the excess CO burner (source 26b) shall be installed and fully operational no later than January 1, 2001.

(ii) Upon EPA approval of the acceptable range of scrubber pressure drop for each source, as provided in paragraph (g)(1) of this section, the owner or operator of the FMC facility shall maintain and operate the source to stay within the approved range. Until EPA approval of the acceptable ranges of scrubber pressure drop for each source, the owner or operator of the FMC facility shall maintain and operate the source to stay within the proposed range for that source, as provided in paragraph

(g)(1) of this section.

(iii) If an excursion from an approved range occurs, the owner or operator of the FMC facility shall immediately upon discovery, but no later than within three hours of discovery, initiate corrective action to bring source operation back within the approved range.

(iv) The owner or operator of the FMC facility shall complete the corrective action as expeditiously as possible.

(6) For each of the pressure relief vents on the furnaces (source 24), FMC shall install, calibrate, maintain, and operate in accordance with the manufacturer's specifications, a device to continuously measure and continuously record the temperature of gases in the relief vent downstream of the pressure relief valve.

(i) The devices shall be installed and fully operational no later than 60 days after the effective date of this rule.

(ii) A "pressure release" is defined as an excursion of the temperature above the temperature range approved in accordance with paragraph (g)(1) of this section. Until EPA approval of the acceptable range of temperature for the pressure release vents, a "pressure release" is defined as an excursion of the temperature above the

range proposed by the owner or operator of the FMC facility for the pressure relief vents, as provided in paragraph (g)(1) of this section.

(iii) The release point on each pressure relief vent shall be maintained at no less than 18 inches of water.

(iv) When a pressure release through a pressure relief vent is detected, the owner or operator of the FMC facility shall, within 30 minutes of the beginning of the pressure release, inspect the pressure relief valve to ensure that it has properly sealed and verify that at least 18 inches of water seal pressure is maintained. The owner or operator of the FMC facility shall then immediately conduct a visual observation to determine compliance with the applicable emission limitation set forth in Table 1 of this section.

(v) If any visible emissions are detected for any period of time during the observation period of the visual observation referenced in paragraph (e)(6)(iv) of this section, the valve shall be manually resealed or repaired as necessary within three hours of the visual observation, and another ten minute visual observation shall be conducted. The owner or operator of the FMC facility shall repeat corrective action, manually resealing or repairing the valve as necessary, until no

visible emissions are observed for any period of time during the required ten minute visual observation.

(7) The owner or operator of the FMC facility shall develop and implement a written operations and maintenance (O&M) plan covering each source identified in Column II of Table 1 of this section, including uncaptured fugitive and general fugitive emissions of PM-10 from each source.

(i) The purpose of the O&M plan is to ensure each source at the FMC facility will be operated and maintained consistent with good air pollution control practices and procedures for maximizing control efficiency and minimizing emissions at all times, including periods of startup, shutdown, and emergency, and to establish procedures for assuring continuous compliance with the emission limitations, work practice requirements, and other requirements of this section.

(ii) The O&M plan shall be submitted to the Regional Administrator within 60 days of the effective date of this rule and shall cover all sources and requirements for which compliance is required 60 days after the effective date of this rule.

(A) A revision to the O&M plan covering each source or requirement with a compliance date of more than 60 days after the effective date of this rule shall

be submitted at least 60 days before the source is required to comply with the requirement.

(B) The owner or operator of the FMC facility shall review and, as appropriate, update the O&M plan at least annually.

(C) The Regional Administrator may require the owner or operator of the FMC facility to modify the plan if, at any time, the Regional Administrator determines that the O&M plan does not:

(1) Adequately ensure that each source at the FMC facility will be operated and maintained consistent with good air pollution control practices and procedures for maximizing control efficiency and minimizing emissions at all times;

(2) Contain adequate procedures for assuring continuous compliance with the emission limitations, work practice requirements, and other requirements of this section;

(3) Adequately address the topics identified in this paragraph (e)(7); or

(4) Include sufficient mechanisms for ensuring that the O&M plan is being implemented.

(iii) The O&M plan shall address at least the following

topics:

(A) Procedures for minimizing fugitive PM-10 emissions from material handling, storage piles, roads, staging areas, parking lots, mechanical processes, and other processes, including but not limited to:

(1) A visual inspection of all material handling, storage piles, roads, staging areas, parking lots, mechanical processes, and other processes at least once each week at a regularly scheduled time. The O&M plan shall include a list of equipment, operations, and storage piles, and what to look for at each source during this regularly scheduled inspection.

(2) A requirement to document the time, date,nd results of each visual inspection, including any problems identified and any corrective actions taken.

(3) A requirement to take corrective action as soon as possible but no later than within 48 hours of identification of operations or maintenance problems identified during the visual inspection (unless a shorter time frame

is specified by this rule or is warranted by the nature of the problem).

(4) Procedures for the application of dust suppressants to and the sweeping of material from storage piles, roads, staging areas, parking lots, or any open area as appropriate to maintain compliance with applicable emission limitations or work practice requirements. Such procedures shall include the specification of dust suppressants, the application rate, and application frequency, and the frequency of sweeping. Such procedures shall also include the procedures for application of latex to the main shale pile (source 2) and the emergency/contingency raw ore shale pile (source 3) after each reforming of the pile or portion of the pile.

(B) Specifications for parts or elements of control or process equipment needing replacement after some set interval prior to breakdown or malfunction.

(C) Process conditions that indicate need for repair, maintenance or cleaning of control or process equipment, such as the need to open furnace access ports or holes.

(D) Procedures for the visual inspection of all baghouses, scrubbers, and other control equipment of at least once each week at a regularly scheduled time.

(E) Procedures for the regular maintenance of control equipment, including without limitation, procedures for the rapid identification and replacement of broken or ripped bags for all sources controlled by a baghouse, bag dimensions, bag fabric, air-to-cloth ratio, bag cleaning methods, cleaning type, bag spacing, compartment design, bag replacement schedule, and typical exhaust gas volume.

(F) Procedures that meet or exceed the manufacturer’s recommendations for the inspection, maintenance, operation, and calibration of each monitoring device required by this rule.

(G) Procedures for the rapid identification and repair of equipment or processes causing a malfunction or emergency and for reducing or minimizing the duration of and emissions resulting from any malfunction or emergency.

(H) Procedures for the training of staff in the above procedures.

(8) For each of the following sources identified in Column II of Table 1 of this section, the owner or operator of the FMC facility shall conduct a visual observation of each source at least once each week at a regularly scheduled time: railcar unloading (source 1), main shale pile (source 2), emergency/contingency raw ore shale pile (source 3), stacker and reclaimer (source 4), east shale baghouse building--fugitives (source 5b), middle shale baghouse building–fugitives (source 6b), west shale baghouse building–fugitives (source 7b), recycle material pile (source 8b), proportioning building–fugitives (source 15c), dust silo fugitives and pneumatic dust handling system (source 17b), briquetting building (source 19), coke unloading building (source 20b), pressure relief vents (source 24), and furnace CO emergency flares (source 25).

(i) The owner or operator of the FMC facility shall immediately, but no later than within 24 hours of discovery, take corrective action if any visible emissions are observed for any period of time during the observation period. Immediately upon completion of the corrective action, the owner or operator of the FMC facility shall conduct another visual observation. This process shall be repeated until no visible emissions are observed for any period of time during the observation

period.

(ii) Should, for good cause, the visible emissions reading not be conducted on schedule, the owner or operator of the FMC facility shall record the reason observations were not conducted. Visible emissions observations shall be conducted immediately upon the return of conditions suitable for visible emissions observations.

(iii) If, after conducting weekly visible emissions observations for a given source for more than one year and detecting no visible emissions from that source for 52 consecutive weeks, the frequency of observations may be reduced to monthly. The frequency of observations for such source shall revert to weekly if visible emissions are detected from that source during any monthly observation or at any other time.

(9) For each following sources identified in Column II of Table 1 of this section, the owner or operator of the FMC facility shall conduct a visual observation of each source at least once each week at a regularly scheduled time: east shale baghouse (source 5a), middle shale baghouse (source 6a), middle shale baghouse outside capture hood–fugitives (source 6c), west shale baghouse (source 7a), west shale baghouse outside capture hood–fugitives (source 7c), slag pit area and

pot rooms (source 8a), calciner cooler vents (source 10), nodule pile (source 11), north nodule discharge baghouse (source 12a), south nodule discharge baghouse (source 12b), north and south nodule discharge baghouse outside capture hood–fugitives (source 12c), nodule fines pile (source 13), screened shale fines pile (source 14), proportioning building-east nodule baghouse (source 15a), proportioning building-west nodule baghouse (source 15b), nodule reclaim baghouse (source 16a), nodule reclaim baghouse outside capture hoods–fugitives (source 16b), dust silo baghouse (source 17a), furnace building-east baghouse (source 18a), furnace building-west baghouse (source 18b), furnace building (source 18c), furnace #1, #2, #3 and #4–Medusa Andersen scrubbers (sources 18d, 18e, 18f and 18g), coke handling baghouse (source 20a), phos dock Andersen scrubber (source 21a), phos dock fugitives (source 21b), roads (source 22), boilers (source 23), and excess CO burner (source 26b).

(i) If visible emissions are detected, the owner or operator of the FMC facility shall immediately, but no later than within 24 hours of discovery, determine if corrective action is needed to reduce visible emissions and ensure proper operations and maintenance of the source and, if so, take corrective action. Immediately upon completion of any corrective action, a certified

observer shall conduct a visible emissions observation of the source using Method 9 with an observation duration of at least 12 minutes. If opacity exceeds allowable levels, the owner or operator of the FMC facility shall take prompt corrective action. This process shall be repeated until opacity returns to allowable levels.

(ii) In lieu of a visual observation under this paragraph (e)(9), the owner or operator of the FMC facility may conduct a visible emissions observation of any source subject to the requirements of this paragraph using EPA Method 9 and a certified reader, in which case corrective action must be taken only if opacity exceeds allowable levels.

(iii) Should, for good cause, the visible emissions reading not be conducted on schedule, the owner or operator of the FMC facility shall record the reason observations were not conducted. Visible emissions observations shall be conducted immediately upon the return of conditions suitable for visible emissions observations.

(iv) If, after conducting weekly visible emissions observations for a given source for more than one year and detecting no visible emissions from that source for 52 consecutive weeks, the frequency of observations may

be reduced to monthly. The frequency of observations for such source shall revert to weekly if visible emissions are detected from that source during any monthly observation or at any other time.

(10) A representative sample of the main shale pile (source 2) and the emergency/contingency raw ore shale pile (source 3) shall be analyzed for moisture content using ASTM Standard D 2216-92 at least once each month.

(i) Such sample shall be taken from the surface of the pile.

(ii) The owner or operator of the FMC facility shall submit a sampling plan to the Regional Administrator for review and approval at least 30 days prior to any sampling that is conducted to meet this requirement.

(iii) Upon EPA approval of the plan, any subsequent sampling must adhere to the plan.

(iv) Any modification to the sampling plan must be submitted to the Regional Administrator for review and approval 60 days prior to the intended use of the modified plan.

(11) Except for, as applicable, monitoring malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero span adjustments), the owner or operator of the

FMC facility shall conduct all monitoring with the monitoring devices required by paragraphs (e)(2), (e)(3), (e)(4), (e)(5), and (e)(6) of this section in continuous operation at all times that the monitored process is in operation. Data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities shall not be used for purposes of this section, including data averages and calculations, or fulfilling a minimum data availability requirement. The owner or operator of the FMC facility shall use data collected during all other periods in assessing the operation of the control device and associated control system.

(12) The minimum data availability requirement for monitoring data pursuant to paragraphs (e)(2), (e)(3), (e)(4), (e)(5), and (e)(6) of this section is 90% on a monthly average basis. Data availability is determined by dividing the time (or number of data points) representing valid data by the time (or number of data points) that the monitored process is in operation.

(13) Nothing in this paragraph shall preclude EPA from requiring any other testing or monitoring pursuant to section 114 of the Clean Air Act.

(f) *Recordkeeping requirements.*

(1) The owner or operator of the FMC facility shall keep records of all monitoring required by this section that

include, at a minimum, the following information:

(i) The date, place as defined in this section, and time of the sampling or measurement.

(ii) The dates the analysis were preformed.

(iii) The company or entity that performed the analysis.

(iv) The analytical techniques or methods used.

(v) The results of the analyses.

(vi) The operating conditions existing at the time of the sampling or measurement.

(2)(i) The owner or operator of the FMC facility shall keep records of all inspections and all visible emissions observations required by this section or conducted pursuant to the O&M plan, which records shall include the following:

(A) The date, place, and time of the inspection or observation.

(B) The name and title of the person conducting the inspection or observation.

(C) In the case of a visible emission observation, the test method (Method 9 or visual observation), the relevant or specified meteorological conditions, and the results of the observation, including raw data and calculations.

(D) For any corrective action required by this section or the O&M plan or taken in response to a problem identified

during an inspection or visible emissions observation required by this section or the O&M plan, the time and date corrective action was initiated and completed and the nature of corrective action taken.

(E) The reason for any monitoring not conducted on schedule.

(ii) With respect to control devices, this requirement is satisfied by meeting the requirements of paragraph (f)(11) of this section.

(3) The owner or operator of the FMC facility shall continuously record the parameters specified in paragraphs (e)(2), (e)(3), (e)(4), (e)(5), and (e)(6) of this section.

(4) The owner or operator of the FMC facility shall keep records of all excursions from ranges approved under paragraphs (e)(3) or (g)(1) of this section, including without limitation, the measured excursion, time and date of the excursion, duration of the excursion, time and date corrective action was initiated and completed, and nature of corrective action taken.

(5) The owner or operator of the FMC facility shall keep records of the time, date, and duration of each pressure release from a furnace pressure relief vent (source 24), the method of detecting the release, the results of the inspection required by paragraph (e)(6) of this section, and any actions

taken to ensure resealing, including the time and date of such actions.

(6) The owner or operator of the FMC facility shall keep records of the time, date, and duration of each flaring of the emergency CO flares (source 25) due to an emergency, the method of detecting the emergency, and all corrective action taken in response to the emergency.

(7) Until January 1, 2001, the owner or operator of the FMC facility shall keep records of the date and start/stop time of each mini-flush; the phossy water flow rate and outlet temperature immediately preceding the start time; whether the operating parameters for conducting the mini-flush set forth in paragraph (c)(5)(ii) of this section were met; and, if the parameters were not met, whether the failure to comply with the parameters was attributable to a “malfunction.”

(8) The owner or operator of the FMC facility shall keep records of the application of dust suppressants to all storage piles, roads, staging areas, parking lots, and any other area, including the identification of the surface covered, type of dust suppressant used, the application rate (gallons per square foot), and date of application.

(9) The owner or operator of the FMC facility shall keep records of the frequency of sweeping of all roads, staging areas, parking lots, and any other area, including the

identification of the surface swept and date and duration of sweeping.

(10)(i) The owner or operator of the FMC facility shall keep the following records with respect to the main shale pile (source 2) and emergency/contingency raw ore shale pile (source 3):

(A) The date and time of each reforming of the pile or portion of the pile.

(B) The date, time, and quantity of latex applied.

(C) Each moisture content analysis performed on material from the pile.

(ii) The information to be contained in this record shall be identified in the sampling plan required under paragraph (e)(10) of this section.

(11) The owner or operator of the FMC facility shall keep a log for each control device of all inspections of and maintenance on the control device, including without limitation the following information:

(i) The date, place, and time of the inspection or maintenance activity.

(ii) The name and title of the person conducting the inspection or maintenance activity.

(iii) The condition of the control device at the time.

(iv) For any corrective action required by this section

or the O&M plan or taken in response to a problem identified during an inspection required by this section or the O&M plan, the time and date corrective action was initiated and completed, and the nature of corrective action taken.

(v) A description of, reason for, and the date of all maintenance activities, including without limitation any bag replacements.

(vi) The reason any monitoring was not conducted on schedule, including a description of any monitoring malfunction, and the reason any required data was not collected.

(12) The owner or operator of the FMC facility shall keep the following records:

(i) The Method 9 initial certification and recertification for all individuals conducting visual emissions observations using Method 9 as required by this section.

(ii) Evidence that all individuals conducting visual observations as required by this section meet the training guidelines described in section 1 of Method 22, 40 CFR part 60, appendix A.

(13) The owner or operator of the FMC facility shall keep records on the type and quantity of fuel used in the boilers

(source 23), including without limitation the date of any change in the type of fuel used.

(14) The owner or operator of the FMC facility shall keep a copy of all reports required to be submitted to EPA under paragraph (g) of this section.

(15) All records required to be maintained by this section and records of all required monitoring data and support information shall be maintained on site at the FMC facility in a readily accessible location for a period of at least five years from the date of the monitoring sample, measurement, report, or record.

(i) Such records shall be made available to EPA on request.

(ii) Support information includes all calibration and maintenance records and all original strip chart recordings for continuous monitoring instrumentation.

(g) *Reporting requirements*

(1) The owner or operator of the FMC facility shall submit to EPA, for each of the operating parameters required to be continuously monitored pursuant to paragraphs (e)(2), (e)(4), (e)(5), and (e)(6) of this section, a proposed range of operation, including a proposed averaging period, and documentation demonstrating that operating the source within the proposed range will assure compliance with applicable

emission limitations and work practice requirements of this section.

(i) The proposed parameter ranges shall be submitted within 180 days of the effective date of this rule for all sources except as follows:

(A) A proposed parameter range for the pressure relief vents (source 24) shall be submitted within 60 days of the effective date of this rule.

(B) Proposed parameter ranges for the calciner scrubbers (source 9), the phos dock Andersen scrubber (source 21a), and the excess CO burner (source 26b) shall be submitted no later than the date by which the emission limitations become applicable to those sources under this section.

(ii) A parameter range for each source shall be approved by EPA through the issuance of a title V operating permit to the FMC facility, or as a modification thereto. Until EPA approval of the acceptable range for a parameter for a source, the owner or operator of the FMC facility shall maintain and operate the source to stay within the proposed range for that source.

(iii) If EPA determines at any time that the proposed or approved range does not adequately assure compliance with applicable emission limitations and work practice

requirements, EPA may request additional information, request that revised parameter ranges and supporting documentation be submitted to EPA for approval, or establish alternative approved parameter ranges through the issuance of a title V operating permit to the FMC facility, or as a modification thereto.

(iv) This requirement to submit proposed parameter ranges is in addition to and separate from any requirement to develop parameter ranges under 40 CFR part 64 (Compliance Assurance Monitoring rule). However, monitoring for any pollutant specific source that meets the design criteria of 40 CFR 64.3 and the submittal requirements of 40 CFR 64.4 may be submitted to meet the requirements of this paragraph (g)(1).

(2) The owner or operator of FMC shall submit to EPA a bi-monthly report covering the preceding two calendar months (e.g., January-February, March-April). Such report shall be submitted 15 days after the end of each two month period, with the last such report covering the period of November and December 2000. The report shall include the following:

(i) The date and start/stop time of each mini-flush; the phossy water flow rate and outlet temperature immediately preceding the start time; and a “Yes/No” column indicating whether the operating parameters for

conducting the mini-flush set forth in paragraph (c)(5)(ii) of this section were met.

(ii) For any “No” entry, an indication of whether the failure to comply with the parameters was attributable to a malfunction and, if so, the date and time of notification to EPA of the malfunction and a copy of the contemporaneous record described in paragraph (c)(5)(ii) of this section.

(iii) For each month, the total mini-flush time in minutes, the number of operating days for the secondary condenser, and the average minutes per operating day.

(3) The owner or operator of the FMC facility shall submit to EPA a semiannual report of all monitoring required by this section covering the six month period from January 1 through June 30 and July 1 through December 31 of each year. Such report shall be submitted 30 days after the end of such six month period.

(i) The semiannual report shall:

(A) Identify each time period (including the date, time, and duration) during which a visible emissions observation or PM-10 emissions measurement exceeded the applicable emission limitation and state what actions were taken to address the exceedence. If no action was taken, the report shall state the reason

that no action was taken.

(B) Identify each time period (including the date, time, and duration) during which there was an excursion of a monitored parameter from the approved range and state what actions were taken to address the excursion. If no action was taken, the report shall state the reason that no action was taken.

(C) Identify each time period (including date, time and duration) of each flaring of the emergency CO flares (source 25) due to an emergency and state what actions were taken to address the emergency. If no action was taken, the report shall state the reason that no action was taken.

(D) Include a summary of all monitoring required under this section.

(E) Include a written report of the results of each performance test conducted in accordance with paragraph (e)(1) of this section.

(F) Describe the status of compliance with this section for the period covered by the semi-annual report, the methods or other means used for determining the compliance status, and whether such methods or means provide continuous or intermittent data.

(1) Such methods or other means shall include, at a minimum, the monitoring, recordkeeping, and reporting required by this section.

(2) If necessary, the owner or operator of FMC shall also identify any other material information that must be included in the report to comply with section 113(c)(2) of the Clean Air Act, which prohibits making a knowing false certification or omitting material information.

(3) The determination of compliance shall also take into account any excursions from the required parameter ranges reported pursuant to paragraph (g)(3)(i)(B) of this section.

(ii) Each semi-annual report submitted pursuant to this paragraph shall contain certification by a responsible official, as defined in 40 CFR 71.2, of truth, accuracy and completeness. Such certification shall state that, based on information and belief formed after reasonable inquiry, the statements and information in the documents are true, accurate, and complete.

(4) The owner or operator of the FMC facility shall notify EPA by telephone or facsimile within 48 hours of the beginning of each flaring of the emergency CO flares (source 25) due to an emergency.

(5)(i) For emissions that continue for more than two hours in excess of the applicable emissions limitation, the owner or operator of the FMC facility shall notify EPA by telephone or facsimile within 48 hours. A written report containing the following information shall be submitted to EPA within ten working days of the occurrence of the excess emissions:

(A) The identity of the stack and/or other source where excess emissions occurred.

(B) The magnitude of the excess emissions expressed in the units of the applicable emissions limitation and the operating data and calculations used in determining the magnitude of the excess emissions.

(C) The time and duration or expected duration of the excess emissions.

(D) The identity of the equipment causing the excess emissions.

(E) The nature and probable cause of such excess emissions.

(F) Any corrective action or preventative measures taken.

(G) The steps taken or being taken to limit excess emissions.

[Add paragraph (g)(5)(ii) if alternative 1 or 2 is adopted for §52.676(c)(8)]

(ii) Compliance with this paragraph is required even in cases

where the owner or operator of the FMC facility does not seek to establish an affirmative defense of startup, shutdown, scheduled maintenance, or emergency under paragraph (c)(8) or (c)(9) of this section.

(6) The owner or operator of FMC shall notify EPA if it uses any fuel other than natural gas in the boilers (source 23) within 24 hours of commencing use of such other fuel.

(7) All reports and notices submitted under this section shall be submitted to EPA at the addresses set forth below:

U.S. Environmental Protection Agency
Region 10
State and Tribal Programs Unit
Office of Air Quality, OAQ 107
1200 Sixth Avenue
Seattle, Washington 98101
(206) 553-1189
Fax: 206-553-0404

(h) *Title V permit.* Additional monitoring, work practice, recordkeeping, and reporting requirements may be included in the title V permit for the FMC facility to assure compliance with the requirements of this section.

(i) *Compliance schedule.* Except as otherwise provided in this section, the owner or operator of the FMC facility shall comply with the requirements of this section within 60 days of the effective

date of this section.

Table 1 to § 52.676

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
1	Railcar unloading of shale (ore) into underground hopper	There shall be no visible fugitive emissions as a result of railcar unloading of shale.	Visual observation
2	Main shale pile (portion located on Fort Hall Indian Reservation)	There shall be no visible fugitive emissions. Moisture content of shale shall be at least 11%. Latex shall be applied after each reforming of pile or portion of pile.	Visual observation ASTM D2216-92
3	Emergency/ contingency raw ore shale pile	There shall be no visible fugitive emissions. Moisture content of shale shall be at least 11%. Latex shall be applied after each reforming of pile or portion of pile.	Visual observation ASTM D2216-92
4	Stacker and reclaimer	There shall be no visible fugitive emissions.	Visual observation

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
5a	East shale baghouse	a. Emissions shall not exceed 0.10 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
5b	East shale baghouse building	b. There shall be no visible fugitive emissions from any portion of the building.	b.Visual observation
6a	Middle shale baghouse	a. Emissions shall not exceed 0.60 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
6b	Middle shale baghouse building	b.There shall be no visible fugitive emissions from any portion of the building.	b. Visual observation
6c	Middle shale baghouse outside capture hood--fugitive emissions	c. Opacity shall not exceed 10% over a 6 minute average	c. Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
7a	West shale baghouse	a. Emissions shall not exceed 0.20 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
7b	West shale baghouse building	b. There shall be no visible fugitive emissions from any portion of the building.	b. Visual observation
7c	West shale baghouse outside capture hood--fugitive emissions	c. Opacity shall not exceed 10% over a 6 minute average.	c. Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
8a	a. Slag handling: slag pit area and pot rooms	a. Until November 1, 2000, emissions from the slag pit area and the pot rooms shall be exempt from opacity limitations. Effective November 1, 2000, opacity of emissions in the slag pit area and from pot rooms shall not exceed 5% over a 6 minute average. Exemption: Fuming of molten slag in transport pots during transport are exempt provided the pots remain in the pot room for at least 3 minutes after the flow of molten slag to the pots has ceased. See also 40 CFR 52.676(c)(4).	Method 9
8b	b. Recycle material pile	b. There shall be no visible fugitive emissions.	b.Visual observation
8c	c. Dump to slag pile	c. Fuming of molten slag during dump to slag pile shall be exempt from opacity limitations.	

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
9	Calciner scrubbers	Effective December 1, 2000, emissions from any one calciner scrubber exhaust stack shall not exceed 0.005 grains per dry standard cubic foot PM10. Flow rate (throughput to the control device) shall not exceed manufacturer's design specification. The calciner scrubbers shall be exempt from opacity limitations.	Methods 5 (all counted as PM-10) and 202 Method 2
10	Calciner cooler vents	Emissions from any one calciner cooler vent shall not exceed 2.0 lb. PM10/hr. Opacity shall not exceed 5% over a 6 minute average.	Methods 201/201A and 202 Method 9
11	Nodule pile	Opacity shall not exceed 10% over a 6 minute average	Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
12a	North nodule discharge baghouse	a. Emissions shall not exceed 2.7 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
12b	South nodule discharge baghouse	b. Emissions shall not exceed 2.7 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	b. Methods 201/201A and 202 Method 9
12c	North and south nodule discharge baghouse outside capture hood--fugitive emissions	c. Opacity shall not exceed 10% over a 6 minute average.	c. Method 9
13	Nodule fines pile	Opacity shall not exceed 10% over a 6 minute average.	Method 9
14	Screened shale fines pile adjacent to the West shale building	Opacity shall not exceed 10% over a 6 minute average	Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
15a	Proportioning building		
	a. East nodule baghouse	a. Emissions shall not exceed 2.0 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
15b	b. West nodule baghouse	b. Emissions shall not exceed 1.6 lb. PM10 /hr. Opacity shall not exceed 7% over a 6 minute average.	b Methods 201/201A and 202 Method 9
15c	c. Proportioning building--fugitive emissions	c. There shall be no visible fugitive emissions from any portion of the building.	c. Visual observation
16a	Nodule reclaim baghouse	a. Emissions shall not exceed 0.9 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
16b	Nodule reclaim baghouse outside capture hood--fugitive emissions	b. Opacity shall not exceed 10% over a 6 minute average.	b. Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
17a	Dust silo baghouse	a. Emissions shall not exceed 3.3 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average .	a. Methods 201/201A and 202 Method 9
17b	Dust silo fugitive emissions and pneumatic dust handling system	b. There shall be no fugitive emissions from any portion of the dust silo or pneumatic dust handling system.	b. Visual observation

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
	Furnace building		
18a	a. East baghouse	a. Emissions shall not exceed 1.5 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
18b	b. West baghouse	b. Emissions shall not exceed 1.2 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	b. Methods 201/201A and 202 Method 9
18c	c. Furnace building; any emission point except 18a, 18b, 18d, 18e, 18f, or 18g	c. Until April 1, 2002, opacity shall not exceed 20% over a 6 minute average. Effective April 1, 2002, opacity shall not exceed 5% over a 6 minute average.	c. Method 9 Method 9
18d 18e	d. Furnace #1 Medusa Andersen e. Furnace #2 Medusa Andersen	d,e,f,g: PM-10 emissions from any one Medusa Andersen shall not exceed 4.8 lb/hr.	d,e,f,g: Methods 201/201A and 202
18f 18g	f. Furnace #3 Medusa Andersen g. Furnace #4 Medusa Anderson	Opacity from any one Medusa Andersen shall not exceed 5% over a 6 minute average.	Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
19	Briquetting building	There shall be no visible fugitive emissions from any portion of the building.	Visual observation
20a	a. Coke handling baghouse	a. Emissions shall not exceed 1.7 lb. PM10/hr. Opacity shall not exceed 7% over a 6 minute average.	a. Methods 201/201A and 202 Method 9
20b	b. Coke unloading building	b. There shall be no visible fugitive emissions from any portion of the coke unloading building.	b.Visual observation
21a	a. Phosphorous loading dock (phos dock), Andersen Scrubber	a. Effective November 1, 1999, emissions shall not exceed 0.007 grains per dry standard cubic foot PM10. Effective November 1, 1999, flow rate (throughput to the control device) shall not exceed manufacturer's design specification. Effective November 1, 1999, opacity shall not exceed 5% over a 6 minute average.	a. Methods 201/201A and 202 Method 2 Method 9
21b	b. Phosphorous loading dock--fugitive emissions	b. Effective November 1, 1999, opacity shall not exceed 10% over a 6 minute average.	b. Method 9

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
22	All roads	Opacity shall not exceed 10% over a 6 minute average.	Method 9
23	Boilers	Emissions from any one boiler shall not exceed 0.09 lb. PM10/hr. Opacity from any one boiler shall not exceed 5% over a 6 minute average.	Methods 201/201A and 202 Method 9
24	Pressure relief vents	**There shall be no visible fugitive emissions at any time except during a pressure release, as defined in 40 CFR 52.676(e)(6).** **Pressure release point shall be maintained at 18 inches of water pressure at all times.** **Emissions during a pressure release, as defined in 40 CFR 52.676(e)(6)(ii) are exempt from opacity limitations.**	Visual observation Inspection of pressure release vent

I Source Number	II Source Description	III Emission Limitations and Work Practice Requirements	IV Reference Test Method
25	Furnace CO emergency flares	There shall be no fugitive emissions at any time except during an emergency flaring caused by an emergency as defined in 40 CFR 52.626(b). Emissions during an emergency flaring caused by an emergency are exempt from opacity limitations.	Visual observation
26a	a. Elevated secondary condenser flare and ground flare	a. See 40 CFR 52.676(c)(5).	
26b	b. Excess CO burner (to be built to replace the elevated secondary condenser flare and ground flare)	b. Effective January 1, 2001, total emissions from all vents/stacks from control devices on this source shall not exceed 6.5 lb. PM10/hr. Effective January 1, 2001,opacity shall not exceed 5% over a 6 minute average.	b. Methods 201/201A and 202 Method 9