ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[OAR 2002–0039; FRL–7551–2]

RIN 2060–AJ02

National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing

AGENCY: Environmental Protection Agency (EPA).

ACTION: Final rule.

SUMMARY: This action promulgates national emission standards for hazardous air pollutants (NESHAP) for taconite iron ore processing facilities. The final standards establish emission limitations for hazardous air pollutants (HAP) emitted from new and existing ore crushing and handling operations, ore dryers, indurating furnaces, and finished pellet handling operations. The final standards will implement section 112(d) of the Clean Air Act (CAA) by requiring all major sources to meet HAP emission standards reflecting application of the maximum achievable control technology (MACT).

The HAP emitted by taconite iron ore processing facilities include metal compounds (such as manganese, arsenic, lead, nickel, chromium, and mercury), products of incomplete combustion (including formaldehyde), and the acid gases hydrogen chloride (HCl) and hydrogen fluoride (HF). Exposure to these substances has been demonstrated to cause adverse health effects, including chronic and acute disorders of the blood, heart, kidneys, reproductive system, respiratory system and central nervous system. Some of these substances are considered carcinogens. However, it should be noted that the extent and degree to which the health effects may be experienced depend on:

Pollutant-specific characteristics (*e.g.*, toxicity, half-life in the environment, bioaccumulation, and persistence); The ambient concentrations observed in the area (*e.g.*, as influenced by emission rates, meteorological conditions, and terrain); The frequency and duration of exposures; and Characteristics of exposed individuals (*e.g.*, genetics, age, pre-existing health conditions, and lifestyle), which vary significantly within the general population.

EFFECTIVE DATE: October 30, 2003.

ADDRESSES: *Docket.* The official public docket is the collection of materials used in developing the final rule and is available for public viewing at the EPA Docket Center (EPA/DC), EPA West, Room B102, 1301 Constitution Ave., NW, Washington, DC 20460.

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SUPPLEMENTARY INFORMATION:

Regulated Entities. Categories and entities potentially regulated by this action include:

Category	NAICS code[1]	Example of regulated entities
Industry	21221	Taconite Iron Ore Processing Facilities [taconite ore crushing and handling operations, indurating furnaces, finished pellet handling operations, and ore dryers].
Federal government		Not affected.
State/local/tribal government		Not affected.

[1] North American Industry Classification System.

This table is not intended to be exhaustive, but rather provides a guide for readers regarding entities likely to be regulated by this action. To determine whether your facility is regulated by this action, you should examine the applicability criteria in § 63.9581 of the final rule. If you have any questions regarding the applicability of this action to a particular entity, consult the person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section.

Docket. The EPA has established an official public docket for this action including both Docket ID No. OAR–2002–0039 and Docket ID No. A–2001–14. The official public docket consists of the documents specifically referenced in this action, any public comments received, and other information related to this action. All items may not be listed under both docket numbers, so interested parties should inspect both docket numbers to ensure that they have received all materials relevant to the final rule. Although a part of the official docket, the public docket does not include Confidential Business Information or other information whose disclosure is restricted by statute. The official public docket is available for public viewing at the EPA Docket Center (Air Docket), EPA West, Room B102, 1301 Constitution Ave., NW., Washington, DC. The EPA Docket Center Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Reading Room is (202) 566–1744, and the telephone number for the Air Docket is (202) 566–1742.

Electronic Docket Access. You may access the final rule electronically through the EPA Internet under the ''**Federal Register**'' listings at *http://www.epa.gov/fedrgstr/.*

An electronic version of the public docket is available through EPA's electronic public docket and comment system, EPA Dockets. You may use EPA Dockets at *http://www.epa.gov/edocket/* to view public comments, access the index listing of the contents of the official public docket, and to access those documents in the public docket that are available electronically. Once in the system, select ''search,'' then key in the appropriate docket identification number. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility in the above paragraph entitled ''Docket.''

Worldwide Web (WWW). In addition to being available in the docket, an electronic copy of the final rule will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of the final rule will be placed on the TTN's policy and guidance page for newly proposed or promulgated rules at *http://www.epa.gov/ttn/oarpg.* The TTN provides information and technology exchange in various areas of air pollution control. If more information regarding the TTN is needed, call the TTN HELP line at (919) 541–5384.

Judicial Review. This action constitutes final administrative action on the proposed NESHAP for taconite iron ore processing facilities (67 FR 77562, December 18, 2002). Under CAA section 307(b)(1), judicial review of the final rule is available only by filing a petition for review in the U.S. Court of Appeals for the District of Columbia Circuit by December 29, 2003. Under

CAA section 307(b)(2), the requirements that are the subject of this document may not be challenged later in civil or criminal proceedings brought by the EPA to enforce these requirements.

Outline. The information presented in this preamble is organized as follows:

I. Background

Section 112(d) of the CAA requires us (the EPA) to establish national emission standards for all categories and subcategories of major sources of HAP and for area sources listed for regulation under section 112(c). Major sources are those that emit or have the potential to emit at least 10 tons per year (tpy) of any single HAP or at least 25 tpy of any combination of HAP. Area sources are stationary sources of HAP that are not major sources. Additional information on the NESHAP development process can be found in the preamble to the proposed rule (67 FR 77562).

We received a total of 29 comment letters on the proposed NESHAP from industry, State agencies, Federal agencies, environmental groups, and private citizens. We offered to provide interested individuals the opportunity for oral presentations of data, views, or arguments concerning the proposed rule, but a public hearing was not requested.

Today's final rule reflects our full consideration of all the comments we received. Major public comments on the proposed rule along with our responses to these comments are summarized in section III of this document. A detailed response to all the comments is included in the Background Information Document (BID) for the promulgated standards (Docket ID No. OAR–2002–0039).

II. Summary of Final Rule

A. Who Must Comply With the Final Rule?

Each owner or operator of an affected source at a taconite iron ore processing plant that is (or is part of) a major source of HAP emissions must comply with the final rule. A taconite iron ore processing plant is a major source of HAP if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

B. What Are the Affected Sources and Emission Points?

The affected sources are each new or existing ore crushing and handling operation, ore dryer, indurating furnace, and finished pellet handling operation at a taconite iron ore processing facility that is (or is part of) a major source of HAP emissions. Emission limitations apply to each ore crushing and handling operation, each ore dryer, each indurating furnace, and each finished pellet handling operation. These processes, as well as their emissions and controls, are described in the preamble to the proposed rule (67 FR 77564–77566).

C. What Are the Emission Limitations?

The final rule includes particulate matter (PM) emission limits, operating limits for control devices, and work practice standards. Particulate matter emissions serve as a surrogate measure of HAP emissions.

Ore Crushing and Handling

The PM emissions limits for ore crushing and handling are 0.008 grains per dry standard cubic foot (gr/dscf) for existing sources and 0.005 gr/dscf for new sources. Compliance with the PM emissions limits for ore crushing and handling is determined based on the flow-weighted mean concentration of emissions for all ore crushing and handling units at the plant.

Ore Dryers

The PM emission limits for each individual ore dryer are 0.052 gr/dscf for existing dryers and 0.025 gr/dscf for new dryers. Ore dryers with multiple stacks calculate their PM emissions as a flow-weighted mean concentration of PM emissions from all stacks.

Indurating Furnaces

For each straight grate indurating furnace processing magnetite, the PM emissions limits are 0.01 gr/dscf for existing straight grate furnaces and 0.006 gr/dscf for new straight grate furnaces. For each grate kiln indurating furnace processing magnetite, the PM emissions limits are 0.01 gr/dscf for existing grate kiln furnaces and 0.006 gr/dscf for new grate kiln furnaces. For each grate kiln indurating furnace processing hematite, the PM emissions limits are 0.03 gr/dscf for existing grate kiln furnaces and 0.018 gr/dscf for new grate kiln furnaces. Indurating furnaces with multiple stacks calculate their PM emissions as a flow-weighted mean concentration of PM emissions from all stacks.

Finished Pellet Handling

The PM emissions limits for finished pellet handling operations are 0.008 gr/dscf for existing sources and 0.005 gr/dscf for new sources. Compliance with the PM emissions limits for finished pellet handling is determined based on the flow-weighted mean concentration of PM emissions for all pellet handling units at the plant.

Operating Limits

For bag leak detection systems, we require that corrective actions be initiated within 1 hour of a bag leak detection system alarm. For dynamic wet scrubbers, the daily average scrubber water flow rate and either the daily average fan amperage or the daily average pressure drop must remain at or above the minimum levels established during the initial performance test. For all other wet scrubbers, the daily average pressure drop and daily average scrubber water flow rate must remain at or above the level established during the initial performance test. Plants using a dry electrostatic precipitator (ESP) must either install and operate a continuous opacity monitoring system (COMS) or maintain the daily average secondary voltage and daily average secondary current for each field at or above the minimum levels established during the initial performance test. If demonstrating compliance using COMS, the average opacity for each 6-minute period must remain at or below the level established during the initial performance test. Plants using a wet ESP must maintain the daily average secondary voltage for each field at or above the minimum levels established during the initial performance test; maintain the daily average stack outlet temperature at or below the maximum levels established during the initial performance test; and maintain the daily average water flow rate at or above the minimum levels established during the initial performance test.

You must submit information on monitoring parameters if another type of control device is used or if alternative monitoring parameters are desired.

Work Practices

All plants subject to the final rule are required to prepare and implement a written fugitive dust emissions control plan. The plan describes in detail the measures that will be put in place to control fugitive dust emissions from the following sources at a plant, as applicable: stockpiles, material transfer points, plant roadways, tailings basin, pellet loading areas, and yard areas. Existing fugitive dust emission control plans that describe current measures to control fugitive dust emission sources that have been approved as part of a State implementation plan or title V permit would be acceptable, provided they address the prior-listed fugitive dust emission sources.

D. What Are the Operation and Maintenance Requirements?

All plants subject to the final rule must prepare and implement a written startup, shutdown, and malfunction plan according to the requirements in 40 CFR 63.6(e). A written operation and maintenance plan is also required for control devices subject to an operating limit and indurating furnaces subject to good combustion practices (GCP). This plan must describe the following: procedures for preventative maintenance requirements for control devices, corrective action requirements for baghouses and continuous parameter monitoring systems (CPMS), and GCP for indurating furnaces. In the event of a bag leak detection system alarm, the plan must include specific requirements for initiating corrective action to determine the cause of the problem within 1 hour, initiating corrective action to fix the problem within 24 hours, and completing all corrective actions needed to fix the problem as soon as practicable. In the event you exceed an established operating limit for an air pollution control device other than a baghouse, you must initiate corrective action to determine the cause of the operating limit exceedance and complete the corrective action within 10 calendar days. Corrective action procedures you take must be consistent with the installation, operation, and maintenance procedures listed in your site-specific CPMS monitoring plan. For indurating furnaces, you must maintain a proper and efficient combustion process through the implementation of GCP.

E. What Are the General Compliance Requirements?

The final rule requires compliance with the emission limitations, work practice standards, and operation and maintenance requirements at all times, except during periods of startup, shutdown, and malfunction as defined in 40 CFR 63.2. The owner or operator must develop and implement a written startup, shutdown, and malfunction plan according to the requirements in 40 CFR 63.6(e)(3).

The final rule also requires keeping a log detailing the operation and maintenance of the process and emission control equipment. This requirement applies during the period between the compliance date and the date that continuous monitoring systems are installed and any operating limits set.

F. What Are the Initial Compliance Requirements?

The final rule requires performance tests to demonstrate that each affected source meets all applicable PM emission limits. The PM concentration (front-half filterable catch only) is to be measured using EPA Method 5, 5D, or 17 in 40 CFR part 60, appendix A. All initial compliance tests must be completed no later than 180 days following the compliance date.

To demonstrate initial compliance with the PM emission limit for the ore crushing and handling affected source, the flow-weighted mean concentration of PM emissions of all units within the affected source must not exceed the applicable PM emission limit. Similarly, for the finished pellet handling affected source, the flow-weighted mean concentration of PM emissions of all units within the affected source must not exceed the applicable PM emission limit. In lieu of conducting performance tests for all ore crushing and handling and finished pellet handling emission units, the plant may elect to form groups of up to six similar emission units and conduct initial performance tests on a representative unit within each group. Each plant must submit a testing plan to the permitting authority for approval. The testing plan must identify the emission units that will be grouped as similar, identify the representative unit that will be tested for each group, and present the proposed schedule for testing.

To demonstrate initial compliance with the PM emission limit for each indurating furnace and each ore dryer, the flow-weighted mean concentration of PM emissions of all stacks associated with each furnace or each ore dryer must not exceed the applicable PM emission limit.

The final rule also includes procedures for establishing site-specific operating limits for control devices during the initial performance test. To demonstrate initial compliance with the work practice standards, plants must prepare, submit, and implement a fugitive dust emission control plan on or before the compliance date. To demonstrate initial compliance with the operation and maintenance requirements, plants must prepare the operation and maintenance plan and certify in their notification of compliance status that they have prepared the written plans and will operate control devices and indurating furnaces according to the procedures in the plan.

G. What Are the Continuous Compliance Requirements?

For ore crushing and handling, ore dryers, and finished pellet handling units, you must conduct subsequent performance tests to demonstrate continued compliance with the PM emission limits following the schedule established in the title V permit for each plant. If a title V permit has not been issued, you must submit a testing plan and schedule to the permitting authority for approval.

For each indurating furnace, you must conduct subsequent performance testing of all stacks based on the schedule established in each plant's title V operating permit, but no less frequently than twice per 5-year permit term. If a title V permit has not been issued, then you must submit a testing plan and schedule to the permitting authority for approval. The testing frequency in the testing plan must provide for tests to be conducted at least twice per 5-year period.

You are required to monitor operating parameters for control devices subject to operating limits and carry out the procedures in their fugitive dust emissions control plan and their operation and maintenance plan. To demonstrate continuous compliance, you must keep records documenting compliance with the rule requirements for monitoring, the fugitive dust emissions control plan, the operation and maintenance plan, and installation, operation, and maintenance of a CPMS.

For baghouses, owners or operators are required to monitor the relative change in PM loading using a bag leak detection system and to make inspections at specified intervals. The bag leak detection system must be installed and operated according to the EPA guidance document ''Fabric Filter Bag Leak Detection Guidance,'' EPA 454/R–98–015, September 1997. The document is available on the TTN at *http://www.epa.gov/ttnemc01/cem/tribo.pdf*. If the system does not work based on the triboelectric effect, it must be installed and operated consistent with the manufacturer's written specifications and recommendations. The basic inspection requirements include daily, weekly, monthly, or quarterly inspections of specified parameters or mechanisms with monitoring of bag cleaning cycles by an appropriate method. To demonstrate continuous compliance, the final rule requires records documenting conformance with the operation and maintenance plan, as well as the inspection and maintenance procedures.

For dynamic wet scrubbers, you must use CPMS to measure and record the daily average scrubber water flow rate and either the daily average fan amperage or the daily average pressure drop. For all other wet scrubbers, you must use CPMS to measure and record the daily average pressure drop and daily average scrubber water flow rate.

For dry ESP, you must either use a COMS to measure and record the average opacity of emissions exiting each stack of the control device for each 6-minute period, or use CPMS to measure and record the daily average secondary voltage and daily average secondary current for each field. You must operate and maintain the COMS according to the requirements in 40 CFR 63.8 and Performance Specification 1 in 40 CFR part 60, appendix B. These requirements include a quality control program including a daily calibration drift assessment, quarterly performance audit, and annual zero alignment.

For wet ESP, you must use CPMS to measure and record the daily average secondary voltage for each field, the daily average stack outlet temperature, and the daily average water flow rate.

The final rule requires you to prepare a site-specific monitoring plan for CPMS that addresses installation, performance, operation and maintenance, quality assurance, and recordkeeping and reporting procedures. These requirements replace the more detailed performance specifications contained in the proposed rule.

To demonstrate continuous compliance, you must keep records documenting compliance with the monitoring requirements (including installation, operation, and maintenance requirements for monitoring systems) and the operation and maintenance plan.

H. What Are the Notification, Recordkeeping, and Reporting Requirements?

The notification, recordkeeping, and reporting requirements are based on the NESHAP General Provisions in 40 CFR part 63, subpart A. Table 2 to subpart RRRRR of 40 CFR part 63 lists each of the requirements in the General Provisions (§§ 63.2 through 63.15) with an indication of whether they apply.

You are required to submit each initial notification required in the NESHAP General Provisions that applies to your plant. These include an initial notification of applicability with general information about the plant and notifications of performance tests and compliance status.

You are required to maintain the records required by the NESHAP General Provisions that are necessary to document compliance, such as performance test results; copies of startup, shutdown, and malfunction plans and associated corrective action records; monitoring data; and inspection records. Except for the operation and maintenance plan, the fugitive dust emissions control plan, and the testing plan, all records must be kept for a total of 5 years, with the records from the most recent 2 years kept onsite. The final rule requires that the operation and maintenance plan, the fugitive dust emissions control plan, and the testing plan, be kept onsite and available for inspection upon request for the life of the affected source or until the affected source is no longer subject to the final rule requirements.

Semiannual reports are required for any deviation from an emission limitation (including an operating limit), or operation and maintenance requirement. Each report is due no later than 30 days after the end of the reporting period. If no deviation occurred, only a summary report is required. If a deviation did occur, more detailed information is required.

An immediate report is required if actions taken during a startup, shutdown, or malfunction are not consistent with the startup, shutdown, and malfunction plan. Deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the authority with delegation for enforcement that the source was operating in accordance with the startup, shutdown, and malfunction plan.

An immediate report is required after the third consecutive and unsuccessful attempt at corrective action for determining the cause of exceedance of an operating limit for an air pollution control device except for baghouses. The report must be submitted within 5 calendar days after the third unsuccessful attempt at corrective action. This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.

You must also submit the fugitive dust emissions control plan, testing plan, and all operation and maintenance plans to the Administrator on or before the applicable compliance date.

I. What Are the Compliance Deadlines?

The owner or operator of an existing affected source must comply by October 30, 2006. An existing affected source is one constructed or reconstructed before December 18, 2002. New or reconstructed sources that startup on or before October 30, 2003 must comply by October 30, 2003. New or reconstructed sources that startup after October 30, 2003 must comply upon initial startup.

III. Summary of Responses to Major Comments

A. How Did We Revise the Cost Estimates and Economic Analysis?

Comment: Three commenters stated that the estimated total capital cost impact of $47.3 million underestimates the cost to the industry. One of the commenters stated that the costs for their plant were underestimated.

Response: The capital equipment costs used in the cost analysis conducted prior to proposal were based largely on historical industry costs provided by industry and vendor estimates obtained by the EPA. All of the indurating furnace capital equipment replacement costs were based on equipment and installation costs incurred by Minntac in 1991 to install two new venturi scrubbers for furnace lines 4 and 5. For ore crushing and handling and pellet handling units, the capital equipment replacement costs were based on equipment costs obtained from two wet scrubber vendors.

In follow-up discussions with the industry, industry representatives indicated that the costs of purchasing and installing a new wet scrubber were underestimated. For example, based on the cost estimates provided by one plant, the installation of two new wet scrubbers on their furnace would cost $18 million, not the $9.4 million estimated by EPA. We asked each plant to provide an estimate of the cost impact the limits in the final rule will have on their plant. Overall, industry estimated a capital equipment and installation cost of $57 million. The costs provided by industry are based on a combination of costs estimated by plant engineers, previous equipment replacement costs, and vendor cost estimates.

The EPA asserts that the impact estimate of $57 million provided by the industry is a conservatively high estimate based on the fact that some plants did not account for the averaging of the emissions for those units within the ore crushing and handling and finished pellet handling affected sources. However, in order to ensure that we fully account for the cost impact to the industry, we used the conservatively high estimates provided by the industry. Therefore, the capital cost impact of the emission limits in the final rule was estimated to be approximately $57 million, including emission control capital costs and monitoring, recordkeeping, and reporting (MRR) capital costs. The annual costs of the final rule are estimated to be $9 million per year, including annualized capital and annual operational and MRR costs. For more information on the industry provided costs and the revised cost analysis, see the revised cost analysis memorandum in the docket.

Comment: Two commenters stated that the costs of the rule as proposed are disproportionate to the reduction in HAP.

Response: The revised estimate of annual compliance costs for the final rule is $9 million per year, and this expenditure is estimated to result in the reduction of 270 tpy of HAP and 10,538 tpy of PM. The corresponding cost per ton of HAP reduced is $33,333; the corresponding cost per ton of PM reduced is $854. These values are similar to or lower than those in other MACT standards. In addition, the emission limits in the final rule are based on the MACT floor level of control. The CAA does not give the EPA the discretion to consider costs for the MACT floor level of control.

Comment: One commenter stated that the costs and resources associated with the administrative requirements (*e.g.*, continuous monitoring, stack testing) of the final rule will pose a significant additional burden on their operations. The commenter cited estimated costs of $515,000 for the installation of additional instrumentation and monitoring equipment, an additional cost of $100,000 for dust collector monitoring maintenance, and an additional cost of $45,000 for stack testing. The commenter stated that their plant is already operating under a title V permit and already has a well-controlled dust control system in place. The commenter asserted that the increased continuous monitoring and increased stack testing is not necessary to protect human health or the environment and adds unnecessary costs.

Response: In the proposed rule, we included only those monitoring and testing requirements that were necessary to ensure the continued compliance with the PM emission limits. However, following a review of the public comments and follow-up discussions with the industry and States, we have written the final rule to reduce the monitoring and testing burden:

- To reduce the monitoring burden, we have deleted the requirements to conduct monthly transducer checks, quarterly gauge calibration checks, semiannual flow sensor calibration checks, daily pressure tap pluggage checks, and monthly electrical connection continuity checks.
- We have reduced the indurating furnace stack testing burden by removing the requirement to conduct simultaneous tests of all the stacks on one furnace. The final rule allows plants to conduct sequential testing of the stacks for a furnace, provided the tests are completed ‘‘within a reasonable period of time, such that the indurating furnace operating characteristics remain representative for the duration of the stack tests.’’
- We have removed the volumetric flow rate and process throughput rate criteria for grouping similar ore crushing and handling and pellet handling emission units. This will allow more of these emission units to be grouped together, and thus, will result in fewer initial compliance tests being required for them.
- For dry ESP, we have allowed plants to monitor daily average secondary voltage and daily average secondary current in lieu of using a COMS.

Comment: According to one commenter, it is confusing that in one section of the Economic Impact Assessment (EIA), the Agency concludes that the final rule alone is unlikely to lead to mine closure, but clearly states that it's possible that two or three firms may close or sell some or all of their operations. The only consistent statement in the EIA, according to the commenter, is that the proposed rule will add to existing financial stresses in the industry.

Response: The empirical literature on steel mill capacity and closure suggests that import and mini-mill competition are more important explanatory variables for capacity and closure decisions than are pollution abatement cost expenditures. The EPA's market and facility impact analysis did not explicitly model mine closure decisions because of limited mine-level data and because the costs of compliance are relatively small. The EPA's data indicate that the compliance costs alone are generally too low to result in facility closure. However, we recognized that several companies that owned taconite mines in 2000 were already under significant financial hardship; four firms experienced operating losses in 2000, and several were also operating under Chapter 11 protection. As a result, EPA collected financial data and considered several criteria to determine whether companies would be able to obtain financing for capital investments associated with compliance, or might have to close or sell individual mine operations. The EPA examined the following company financial data:

- Change in profits projected by the economic model;
- Altman Z-scores;
- Current ratios; and
- Recent environmental compliance expenditures.

Based on our review, EPA concluded that two or three companies may close or sell operations. A review of recent data from the U.S. Geological Survey (USGS) and company financial reports confirms this pattern. In 2001, financially-strapped steel companies sold assets. Cleveland-Cliffs raised its total ownership of Tilden mine to 85 percent by acquiring an additional 45 percent share from Algoma Steel Inc. Cleveland-Cliffs and Minnesota Power purchased LTV Steel Co. in late 2001. Cleveland-Cliffs then acquired all the mining and processing facilities, including 25 percent share of the

Empire mine. In the face of continuing financial pressures from mini-mills and imports, steel companies may close or sell taconite facilities if they cannot obtain financing for compliance. A USGS iron ore expert contacted by EPA, however, stated that 2002 financial and market conditions were somewhat better than 2001. This was confirmed by reviewing financial statements for these firms; while still experiencing difficult conditions, in 2002 conditions improved somewhat compared to 2001.

Comment: One commenter from National Steel stated that it will likely be forced to shut down because it will be unable to make the upgrades necessary to comply with the rule as proposed. National currently employs nearly 500 people. The rule as proposed is anticipated to put these people out of work for a reduction of less than 5 tons of HAP. In addition to the anticipated closure of National's operations, the EPA analysis concluded that another one or two taconite ore processing plants may also close.

Response: As noted in the previous response, EPA's analysis suggests that the costs of achieving compliance are not sufficient alone to result in taconite plants becoming unprofitable. However, EPA recognizes that there are long-standing trends in the industry, such as increased imports of iron and steel and increasing use of mini-mill technology, that have resulted in decreasing demand for U.S.-produced taconite pellets over time. Due to these trends, four companies owning taconite facilities were unprofitable in 2000, and three of them (including National Steel) were operating under the protection of Chapter 11 of the bankruptcy code. The EPA's analysis recognizes that firms that are unprofitable or in bankruptcy may have difficulty obtaining financing for the capital investments needed to comply. Such firms may choose to sell or shut down their taconite plants. The EPA does not feel that such a decision should be entirely attributed to the final rule. However, note that recent industry data seem to show that in 2002, prices and profits improved somewhat due in part to the decrease in taconite supply (due in part to LTV's closing of the Hoyt Lakes facility) and in part due to tariff protection of several steel products.

Comment: According to one commenter, the statement in the EIA that two or three mines may close implies that Minnesota would see an additional loss of approximately 900 direct employees and $20 million in local taxes. The loss of 900 jobs equates to $67.5 million in wages and benefits. These figures represent a realistic social impact and create a different scenario than the one represented by the EPA in the EIA. These economic impacts will be ''devastating'' to an area heavily dependent on the mining industry.

Response: Chapter 4 of the EIA contains a regional impact analysis carried out by EPA. The analysis is carried out using IMPLAN, a regional-level input-output model. The total direct impact on each region (a State in this analysis) is defined in the EIA as the change in local expenditures resulting from final rule implementation. The direct impact of the final rule is estimated based on the results of the market model, and includes expenditures for compliance (in this case, positive) and adjustments in outputs in response to price changes (in this case, negative or positive). Generally, the direct impact includes the net effect of reduction in local spending because of output declines and the increase in local spending to implement the controls. For the State of Minnesota, the EIA shows a net reduction in local spending of $2.7 million. This is due to a loss of government revenues since a portion of state revenues comes from taxes on the total production from taconite iron ore. With the value of changes in total output included, the total impact to Minnesota is a reduction of $3.9 million in local spending.

Minnesota is estimated to experience a reduction of 30 full-time employees as a result of the reduction in taconite production. Thus, EPA estimates do show a reduction in local spending and employment in Minnesota from final rule implementation, but not anywhere close to the amounts asserted by the commenter.

A separate financial assessment examined the financial condition of companies that own taconite facilities. Because of long-standing trends in the iron and steel industry (including increasing use of electric arc furnace mini-mill technology and increasing imports of iron and steel), several of the owner companies have experienced financial stress, and three are operating under Chapter 11 protection. For these reasons, EPA concluded that at least those three firms may have some difficulty obtaining the financing needed to make capital equipment investments at their plants, including investments associated with environmental compliance. The EPA stated that as many as two or three additional taconite facilities were in danger of closing or selling their taconite plants at the time of the analysis, due mainly to factors unrelated to the rule as proposed. However, the additional costs associated with the final rule will put additional stress on these already stressed companies. Recent USGS data indicate that in 2001, financially-strapped taconite firms did sell assets to Cleveland Cliffs. Since the original EIA, however, conditions have improved somewhat in the industry. The reduced output due to the closure of Hoyt Lakes, and the tariff, which has increased the effective price of imported iron and steel commodities, have resulted in increased prices and profits for iron and steel companies over the past year. Thus, the companies are somewhat less vulnerable than they were at the time of EPA's earlier analysis.

B. How Did We Revise the Performance Testing Requirements?

Comment: Two commenters stated that language should be included in the final rule either authorizing some discretion on behalf of State agencies or otherwise allowing testing completed between the promulgation date and the compliance date to be counted as initial compliance testing. The commenters stated that this will allow additional time to spread out the compliance testing requirements.

Response: At proposal, plants were given 2 years after the compliance date to conduct their initial compliance tests for ore crushing and handling and pellet handling units, and 180 days after the compliance date to conduct their initial compliance tests for indurating furnaces. However, since the time of proposal, EPA has determined that allowing more than 180 days for initial compliance is not consistent with the 40 CFR part 63 General Provisions. Therefore, we have written the initial compliance testing deadline for ore crushing and handling and pellet handling units at 180 days after the compliance date.

More than 180 days are needed to conduct compliance testing and to reduce the burden of the final rule on the industry. Therefore, the EPA has written the final rule to allow source tests conducted between the promulgation date and the compliance date to be used for compliance demonstration, as long as the tests are performed in accordance with the requirements of the final rule. Since the compliance period is 3 years, plants will have a total of 3½ years to conduct the initial compliance tests for all of their units.

Comment: Two commenters supported the part of the proposed standard that allows plants to conduct initial performance tests by testing a representative sample of units within a group of similar units. However, in a redline/strike-out version of the proposed rule submitted by the commenters, they removed the specific criteria defining similar units in § 63.9620(f) and the criteria indicating the number of units that must be tested per similar group in § 63.9620(g). In the place of these specific criteria, the commenters inserted a statement that refers to criteria established by the State agency or in the title V permit.

Response: In follow-up discussions with the commenters, EPA asked the commenters to clarify their specific concerns regarding the criteria for the testing of representative units. The commenters indicated that their primary concern was with the criteria in paragraphs (3) and (4) of § 63.9620(f), which require the volumetric flow rates of the emission units to be within plus or minus 10 percent of the representative emission unit, and the actual process throughput rate to be within plus or minus 10 percent of the representative emission unit. The commenters stated that these criteria were so restrictive that they would not be able to group very many units.

The EPA also conducted follow-up discussions with the Minnesota Pollution Control Agency (MPCA) regarding the criteria they use for grouping similar units. The MPCA staff indicated that the primary reason they group emission units is to reduce the number of permitted emission units, although the same groupings are used for testing purposes. The grouping of emission units by MPCA was conducted primarily on the basis of control type, installation date, and, to a certain degree, process type. However, in some cases they do group emission units from different processes. They do not group emission units on the basis of flow rate or process throughput.

Based on these discussions with the commenter and MPCA, EPA has determined that the criteria in § 63.9620(f)(3) and (4) are too restrictive and, therefore, do not achieve EPA's true intent—the reduction of the initial compliance test burden for ore crushing and handling and pellet handling emission units. As a result, EPA has not included the criteria in § 63.9620(f)(3) and (4) as proposed. The criteria in § 63.9620(f)(1) and (2) as proposed have been retained in the final rule. In addition, we have included the following new criteria: The representative unit must have parametric monitoring values that encompass the characteristics of all the emission units within the group.

Comment: Three commenters stated that the simultaneous testing of multiple indurating furnace stacks is costly. Two of the commenters stated that simultaneous testing is also impractical and possibly not even feasible.

Response: In follow-up discussions with the commenters, they stressed that some furnaces have as many as five stacks. In order to test these stacks simultaneously, they would need to have five source testing teams on site at the same time. The commenters stated that this would be very expensive. The commenters stated that for their current title V permits, they are not required to conduct simultaneous tests of all stacks for a furnace. In our discussions with MPCA, they confirmed that, although they require all plants with permits to test all furnace stacks, they do not require that the plants test all the stacks on a furnace simultaneously. Also, in these discussions, it was noted that the operating conditions are consistent enough that emissions should not vary significantly over a short period of time. Based on these discussions, EPA agrees that the simultaneous testing of indurating furnace stacks would be costly and would provide no additional compliance assurance. Therefore, in order to reduce the source testing burden of the final rule on the industry and to maintain consistency with current testing requirements, EPA has not included the requirement for simultaneous testing in the final rule.

Comment: Two commenters stated that any requirements for sample volume or sample time should be removed from the initial and continuous compliance testing requirements. The commenters stated that the final rule should not include provisions that are different from already established EPA test methods.

Response: In the proposed rule, we specified a minimum sample volume of 60 dscf for EPA Method 5 (40 CFR part 60, Appendix A) tests to ensure that enough PM is collected to provide accurate results. The EPA Method 5 does not contain specifications for sample volume or sample time (*i.e.*, sampling duration). Therefore, it is not uncommon for the EPA to specify a minimum sample volume or sample time corresponding to emission characteristics of an industry for EPA Method 5 tests. For example, the Integrated Iron and Steel NESHAP specifies a minimum sample volume (60 dscf) for EPA Method 5 tests.

Based on historical Method 5 tests from taconite plants, most 1-hour tests sampled about 30 to 50 dscf and obtained a dry catch of 2 to 20 milligrams (mg). The EPA's Emissions Measurement and Assessment Division recommends a dry particulate catch of approximately 20 mg for an accurate Method 5 test. At the same historical particulate concentrations, a sample volume of 60 dscf or a test of 2 hours in duration will obtain a dry catch of approximately 20 to 30 mg. In the proposed rule, we specified a minimum sample volume of at least 60 dscf for each run of a Method 5 test to ensure that an adequate amount of dry catch is obtained. However, since proposal we have determined that specifying a 2-hour sampling time will provide a greater assurance that an adequate catch is obtained. For example, with a sample volume of 60 dscf, a 20-mg dry catch is obtained for units with emissions of 0.005 gr/dscf or greater. By comparison, given the typical sampling rates of 0.75 to 1 dscf per minute from the historical tests, specifying a 2-hour test provides a 20-mg dry catch for units with emissions as low as 0.003 gr/dscf. In addition, specifying the sampling time is consistent with other recently published rules, such as the Portland Cement NESHAP. Therefore, we have modified the testing requirements in the final rule by removing the requirement for a sample volume of 60 dscf and adding the requirement that the duration of each test run be at least 2 hours.

C. How Did We Revise the Emission Limitations?

Comment: Two commenters stated that the emission limits should be set at two significant figures and not three significant figures. The commenters asserted that using three significant figures implies more precision than exists in reality and establishes limits that are unrealistically stringent and that do not allow for natural variations.

Response: In the proposed rule, we numerically expressed the emission limits for all affected sources, new and existing, to three digits (*e.g.*, 0.011 gr/dscf, 0.025 gr/dscf, and 0.008 gr/dscf). Thus, the proposed emission limits were already expressed as one or two significant figures. However, the intent of the commenters is for the EPA to consider rounding the proposed emission limits to two digits to account for normal variability in the taconite iron ore processing operations, performance of air pollution control equipment, and source testing procedures.

We have reevaluated how natural variations were accounted for in the proposed emission limits for existing sources. The PM emission limits for existing sources in the ore crushing and handling affected source and the finished pellet handling affected source remain at 0.008 gr/dscf. In the final rule, you have the option to determine an overall, flow-weighted average PM concentration for all emission units within each of these two affected sources. One purpose for the flow-weighted average PM concentration procedure is to account for natural variability in the various types of emission units within each affected source, the processing operations, the performance of air pollution control equipment, and source testing procedures.

The PM emission limits for existing sources in the indurating furnace affected source will be rounded to two digits. For both existing straight grate and grate kiln indurating furnaces processing magnetite, the PM emission limit is 0.01 gr/dscf. For existing grate kiln indurating furnaces processing hematite, the PM emission limit is 0.03 gr/dscf. After we considered the amount of PM source test data available in establishing the MACT floor, observed variability in measured PM concentrations from the furnace exhaust stacks, and noted fluctuations in the taconite iron ore process, we determined that it is appropriate to round the PM emission limits for existing indurating furnaces to two decimal places in order to fully account for natural variability. Even after rounding the PM emission limits for existing indurating furnaces, we will still achieve nearly the same level of emission reduction, while offering increased flexibility to the industry to comply with the emission standards of the final rule.

The PM emission limit for existing ore dryers was determined to be the level of control indicated by the existing State limit of 0.052 gr/dscf. Therefore, it is not appropriate to round the PM emission limit for existing ore dryers. The PM emission limit for existing ore dryers is 0.052 gr/dscf in the final rule.

The PM emission limits for all new affected sources represent an actual performance level achieved by the best performing source in each affected source. Thus, the new source emission limits can be achieved through the proper design and construction/reconstruction of a new affected source.

Comment: Three commenters stated that the final rule should more clearly describe how to calculate the flow-weighted mean PM emissions concentration for the material handling operations.

Response: We agree with the commenters and have written §§ 63.9621 and 63.9622 to provide additional clarification for calculating the flow-weighted mean PM emissions concentration for ore crushing and handling and finished pellet handling. Specifically, the final rule clarifies that when calculating the flow-weighted mean PM emissions for ore crushing and handling and finished pellet handling, the ''average'' PM concentration corresponding to each emission unit in an affected source is multiplied by the maximum design volumetric flow rate of the corresponding emission unit. The ''average'' PM concentration from an emission unit is derived as the arithmetic mean of a PM source test comprised of three valid sampling runs on the emission unit. If the affected source elects to conduct representative compliance testing for a group of similar emission units, the PM concentration determined for the tested emission unit will be assigned to the other emission units identified as similar within the group.

D. How Did We Revise the Continuous Compliance Requirements?

Operating Limits

Comment: Two commenters objected to using operating limits established during the performance test to determine continuous compliance. The commenters stated that a performance test is only a snapshot of an operation at a point in time and may not encompass the full operational variability that occurs. The commenters stated that this approach effectively sets a new more stringent NESHAP emission limit at the emissions level actually emitted during the performance test. Therefore, the commenters stated that any operation outside of the operating parameter range should not be classified as a deviation. The commenters stated that the D.C. Circuit Court has made it clear that MACT standards are to represent the best performing source on its worst day (see *National Lime* v. *EPA*, 233 F.3d 625, 51 ERC 1737 (D.C. Cir. 2000), and *Cement Kiln Recycling Coalition* v. *EPA*, 255 F.3d 855, 52 ERC 1865 (D.C. Cir 2001)). The commenters asserted that as long as a source is operating properly, follows procedures in the malfunction plan, and proceeds appropriately to corrective action, then variations within the range of proper operation should not constitute deviations. The commenters stated that the EPA may require plants to log such information and even report it, but not necessarily as a deviation under title V.

Response: In follow-up discussions with the industry, we were able to determine that the taconite industry's primary concern regarding the operating limits was being able to maintain the equipment so that they did not exceed the established operating limit. Specifically, their concerns included their ability to maintain the pressure drop above the operating limit for venturi-rod deck units with a fixed throat and/or a volumetric flow dependent of process conditions; and, their ability to operate and obtain meaningful readings of opacity from dry ESP using a COMS in conditions of high moisture and low opacity.

Regarding the measurement of the pressure drop, we have increased the averaging time from hourly to daily. The daily averaging period addresses industry's concerns about their ability to control pressure drop during short periods of time when the scrubber may experience a pressure drop lower than the operating limit. In addition, for dynamic wet scrubbers, we have provided the flexibility of monitoring either the daily average pressure drop or the daily average fan amperage, in addition to the daily average scrubber water flow rate. This addresses industry's concern that for dynamic wet scrubbers, both pressure drop and fan amperage are good indicators of proper performance.

Regarding the measurement of opacity using COMS, we have verified with equipment vendors that COMS are available that will provide accurate readings under the moisture and low opacity conditions present at taconite facilities. However, we understand that currently there are no COMS in operation at taconite plants and that due to costs or site-specific operating conditions a COMS may not be the best option. Therefore, in the final rule have provided plants the flexibility to establish their operating limit either as the 6-minute average opacity or as the daily average secondary voltage and the daily average secondary current for each field.

In addition, we have included language in the final rule to clarify when not meeting an operating limit becomes an exceedance. Specifically, after the first two times that you do not meet the operating limit, you must take corrective action. After the third time that you do not meet the operating limit, you must submit a written report within 5 calendar days and report the third unsuccessful attempt of corrective action as a deviation and continue corrective action.

Bag Leak Detection Systems

Comment: Two commenters stated that the requirement in § 63.9634(d)(1) of the proposed rule that requires that the bag leak detection system not alarm for more than 5 percent of the time should be deleted from the final rule.

Two commenters pointed out that § 63.7833(d)(1)(iii) of the proposed rule specifies that 1 hour of alarm be logged even if procedures are implemented to determine the cause of the alarm and corrective action is taken in less than 1 hour. The commenters contended that the requirement artificially and unfairly inflates the semiannual percentage of alarm time and does not provide an incentive for sources to initiate procedures as quickly as may be possible. The commenters suggested that the final rule should require the plant to ''count the actual amount of time it took to initiate procedures to determine the cause of the alarm.''

Three commenters stated that in the requirement in § 63.9634(d)(1)(v) that the bag leak detection system not alarm for more than 5 percent of the ''total operating time,'' it is unclear if the ''total operating time'' refers to the operating time of the affected source or the time the baghouse is actually evacuating emissions generated by the affected source. The commenters pointed out that some baghouses, by design, evacuate emissions for only a few minutes each hour. The commenters recommended that EPA clarify its intent that the ''total operating time'' refers to the total operating time of the affected source.

Response: We agree with the commenters and have not included the 5 percent operating limit requirement for baghouse leak detectors in § 63.9634(d)(1) of the final rule. As a result, the requirements to log alarm time and to determine the ratio of the sum of the alarm times to the total operating time have also not been included. However, it is important that corrective action be initiated promptly, so we are retaining the requirement in § 63.9600(b)(2) that you ''initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable.''

Wet Scrubber CPMS

Comment: Three commenters stated that the labor hours required for the monthly transducer checks and the quarterly gauge calibration checks for the pressure drop sensor (§ 63.9632(b)(1)(iv)), and the semiannual flow sensor calibration checks (§ 63.9632(b)(2)(iii)) are excessive compared to the potential emissions control improvement. Two of the commenters suggested that rather than mandatory monthly, quarterly, or semiannual calibration checks, any control unit which emits less than 5 percent of the total annual PM emissions at the plant should be allowed to reduce the periodic checks required by each of the cited provisions to once annually. The other commenter suggested that the EPA should allow each source to propose an alternative method to the proposed calibration checks to the appropriate permitting agency.

Three commenters stated that the daily pressure tap pluggage check (§ 63.9632(b)(1)(iii)) and monthly electrical connection continuity checks (§ 63.9632(b)(1)(vi)) are overly burdensome and costly to implement. The commenters argued that the manual labor and clock hours required for such continuity checks would be so large that the monitoring systems would have to be shut down so frequently and for such a length of time that they would have virtually no operating time. According to the commenters, these provisions should be modified so as to provide ''a program within the CPMS to alarm the process unit operator and to record the alarm for a zero value indication and for a static value indication that satisfies the requirement of this provision.'' In addition, one commenter stated that, if no change is made, the labor costs for the continuity checks must be factored into the economic analysis.

Response: The specific installation, operation, and maintenance requirements for wet scrubber CPMS have not been included in the final rule. Therefore, the requirements for monthly transducer checks, quarterly gauge calibration checks, semiannual flow sensor calibration checks, daily pressure tap pluggage checks, and monthly electrical connector continuity checks have not been included in the final rule. In place of the specific requirements, we have included the requirement that, for each CPMS, you must develop and make available a site-specific monitoring plan that addresses the following:

- Installation of CPMS sampling probe so that measurement is representative of control of the exhaust emissions.
- Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system.
- Performance evaluation procedures and acceptance criteria (*e.g.*, calibrations).
- Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (3), (4)(ii), (7), and (8).
- Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).
- Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i).

Comment: Three commenters stated that it is inappropriate to set a single (pressure drop) point for operating wet scrubbers and recommended that EPA remove the pressure drop requirement and rely on the operation and maintenance plan for compliance. The commenters pointed out that venturi-rod deck scrubbers operate over a range of pressure drop that is affected by scrubbing water flow rate, scrubber water flow distribution, water temperature, gas temperature, and the square of the process gas flow rate. The commenters stated that operators cannot directly control the pressure drop in a venturi-rod deck scrubber. By setting the average pressure drop at the minimum level established during the performance test, the commenters stated that the rule effectively forces a source to operate well below the emission limit.

Response: In follow-up discussions with the commenters, it was clarified that their comments referred only to venturi-rod deck scrubbers installed on indurating furnaces. These venturi-rod deck scrubbers are fixed-throat scrubbers for which the pressure drop can be measured, but not directly controlled. Two commenters stated that they cannot directly control the pressure drop across the venturi-rod deck scrubbers because of the following factors:

- The scrubbers are of a fixed-throat design;
- The fan drawing or pushing air through the scrubber operates at a fixed speed and fixed diameter; and
- The damper prior to the scrubber is used to control the overall flow of air through the system; therefore, it cannot be used to control the pressure drop to the scrubber without affecting the entire process. The damper is opened more or closed more, as necessary, to modulate the air flow as changes occur in the process. As production rate increases, the damper is opened more and, therefore, the pressure drop across the scrubber increases. Due to these factors, the pressure drop across the venturi-rod deck scrubbers on the furnaces is more variable than other controls and is difficult to regulate.

The commenters presented data showing the variability of the pressure drop for their venturi-rod deck scrubbers. One commenter presented pressure drop readings taken every 20 minutes that ranged from 12 to 4 inches of pressure drop, with very few points below 4 inches of pressure drop.

However, after excluding periods of malfunction and looking at the daily average pressure drop instead of instantaneous readings, the data showed that the daily average pressure drop for each scrubber fell within a narrow range. The difference between the lowest daily average pressure drop and the highest daily average pressure drop was only about 2 or 3 inches of pressure drop. Based on these data, the commenter stated that they were confident that they could maintain a pressure drop at or above the operating limit based on a daily average.

The other commenter provided daily average pressure drop for their venturi-rod deck scrubbers. The data showed that on a daily average basis, the pressure drop for each venturi-rod deck scrubber varied by 1 to 3.6 inches over a period of 2 months. The commenter requested that they be allowed to use historical pressure drop data to establish the pressure drop operating limit for venturi-rod deck scrubbers on indurating furnaces. In addition, the commenter requested that compliance with the pressure drop operating limit for venturi-rod deck scrubbers on indurating furnaces be determined on a daily average basis.

To address the technical issues raised by the commenters, we have written the final rule to allow the use of pressure drop data from PM tests conducted on or after December 18, 2002 (the proposal date) to establish the operating limit for venturi-rod deck scrubbers controlling emissions from indurating furnaces. The historical pressure drop data must be from a certified test for which the PM emission concentration was at or below the applicable indurating furnace limit in Table 1 to the final rule. In addition, the basis for compliance with the pressure drop operating limit for venturi-rod deck scrubbers on indurating furnaces has been written as an hourly average not a daily average.

COMS

Comment: Two commenters stated that there should not be any requirement to install or operate a COMS. The commenters do not support setting an opacity limit on a case-by-case and site-by-site basis. In addition, the commenters asserted that the opacity will be low enough to be outside of the range of error for the test method (the COMS), and sources could create a reportable deviation without truly exceeding the actual opacity limit. Instead, the commenters stated that there should be a requirement for a visible emission check, as is required in the Portland Cement NESHAP.

Response: We have verified with equipment vendors that COMS are available that will provide accurate readings at low opacity conditions. Certain models of COMS can measure opacity as low as 0.1 percent with an accuracy of $\pm$ 0.3 percent. In addition, the COMS vendors indicated that the COMS will provide accurate readings under the moisture conditions present at taconite facilities (typically 9 percent moisture). However, we understand that currently there are no COMS in operation at taconite plants (one facility has scheduled a trial installation for later this year) and that due to equipment and installation costs or site-specific operating conditions, a COMS may not be the best option for each plant. Therefore, in the final rule we have provided two options for the operating limits for dry ESP: the 6-minute average opacity, as monitored using a COMS; or the daily average secondary voltage and the daily average secondary current for each field, as monitored using a CPMS.

During our dry ESP discussions with industry, it was requested that we add specific monitoring requirements for wet ESP. After discussion with the industry and State agencies, we established the following monitoring parameters for wet ESP:

- Daily average secondary voltage for each field;
- Daily average stack outlet temperature; and
- Daily average water flow rate.

Therefore, the final rule contains requirements to establish operating limits for these parameters during the initial performance test. Plants must also monitor these parameters such that they are maintained at or above the operating limits (for secondary voltage and water flow rate), or below the operating limits (for stack outlet temperature).

E. How Did We Revise the Baseline Emissions?

Comment: Two commenters stated that the HAP emission values in the preamble need to be updated to accurately reflect what is currently being emitted. Specifically, one of the commenters stated that U.S. Steel has more recent testing data that can be used to update the estimates. Another one of the commenters asserted that HAP emissions from taconite ore plants are inaccurately characterized. The commenter stated that several companies have more recent test data and EPA can revise the HAP emissions accordingly. The commenter stated that a more accurate depiction of the emissions will alter the economic analysis.

Response: In follow-up discussions with the industry, we asked them to submit any test data that were not reflected in the proposal analyses. We received the following additional emission tests:

- Engineering Emissions Test Report for Tilden conducted the week of November 4, 1999. Tested PM, nitrogen oxides (NO_X), HCl, HF, benzene, hexane, toluene, formaldehyde, metals, and asbestos.
- Particulate and Metals Emission Study for Tilden conducted May 7 to 11, 2002. Tested total PM and metals.
- MPCA spreadsheet incorporating Minntac emissions tests for December 2002 and August 2001. Tested formaldehyde, HCl, HF, chlorine, and fluorine.
- Northshore formaldehyde emissions tests conducted on March 6, 2003. We have reviewed the test data listed above and have revised the baseline HAP emissions as appropriate. The baseline HAP emissions have been modified as follows:
- Baseline formaldehyde emissions were updated for Minntac, Northshore, and Tilden. The baseline formaldehyde emissions for EVTAC and Inland were also updated, since their formaldehyde emission factors were based on Northshore estimates. This resulted in a decrease in baseline formaldehyde emissions from 180.7 to 30.1 tpy. This had no effect on the HAP emission reduction estimate since we assumed that there would be no formaldehyde emission reductions.
- Baseline HCl and HF emissions were updated for Minntac and Tilden. This resulted in a decrease in baseline HCl emissions from 349.1 to 274 tpy and a decrease in baseline HF emissions from 308 to 229 tpy. As a result, the emission reduction from acid gases decreased from 356.1 to 256 tpy.

F. How Did We Select the Pollutants?

Mercury

Comment: Seventeen commenters stated that EPA has a statutory obligation to set emission standards for mercury. Several commenters specifically cited *National Lime*. One commenter stated that the fact that no specific type of control technology has yet proven effective and affordable for taconite processing cannot legally excuse the industry from regulation. Thirteen commenters asserted that EPA's practice of not setting standards for industries that do not yet control their emissions is illegal and encourages the industry to do as little as possible to control mercury.

One commenter encouraged EPA to consult with the Minnesota Department of Natural Resources, Division of Lands and Minerals, to get the most up-to-date information on potential mercury control strategies for taconite facilities before promulgation. The commenter stated that viable mercury control technologies or strategies may be identified in the very near future. The commenter asserted that the best strategies to control mercury may be operational modifications such as different handling practices for captured dust from indurating furnaces.

Two commenters stated that the EPA must set an emission standard for mercury based on the statute's ''minimum stringency requirement'' (*i.e.*, the MACT floor) even if specific technologies or operating practices to achieve it have not been identified. One commenter stated that if no such controls or practices are being used, EPA must find some other factor on which to base the standard. Three commenters suggested that EPA determine the floor based on the average mercury emission level of the five plants (or furnaces) with the lowest emissions, and then set the mercury emission limit there. One commenter stated that if certain plants will not be able to meet such a standard within 4 years, the statute provides relief through a Presidential exemption for a period of not more than 2 years. The commenter also contends that the CAA allows relief for a company that makes a significant effort to identify and implement effective controls but is still unable to meet the standard by the 4-year deadline. The commenter stated that EPA included a similar provision in the Portland Cement NESHAP. The commenter believes that setting a standard would induce the industry to invest in research and development to meet it. The commenter stated that promising mercury control technologies for the taconite industry are on the horizon. The commenter stated that the EPA should investigate the COHPAC-TOXECON system, corona discharge, and catalytic oxidation, as well as an iron oxide sorbent system being tested in Minnesota.

One commenter stated that EPA recognized in the proposed rule that the mercury content of the taconite ore is the ''key factor'' affecting mercury emissions. The commenter reasoned that by setting a mercury standard, plants that use ore with high mercury content will have to find ways to reduce mercury emissions, including switching to cleaner raw materials or installing pollution controls.

One commenter stated that the final rule should consider precluding the use of coal, even as a secondary fuel, to control mercury emissions.

Thirteen commenters recommended that EPA establish a reasonable limit for mercury and allow relief for a company that is unable to meet the limit after making appropriate technological or research investments.

Two commenters requested more information supporting EPA's finding that ''we were unable to find any viable control technologies or operating procedures for achieving reduction in mercury emissions from indurating furnaces at taconite iron ore plants.'' One of the commenters requested the cost of control per ton of mercury control that was estimated in EPA's analysis. Both commenters stated that control technologies being developed for coal-fired power plants could be used to control mercury emissions from taconite facilities. Two commenters mentioned activated carbon injection as a potential mercury control for taconite plants.

One commenter stated that, both within the binational program and in national policy documents, the EPA insinuates that the NESHAP program is the means by which the Agency will achieve mercury reduction goals. The commenter asserted that an emission limit for mercury should be set that pushes the industry to research and develop control technology but also allows for relief if a company is unable to meet the standard after diligently pursuing such technology. The standard should also include mercury monitoring requirements.

Three commenters stated that if mercury emissions from the taconite industry are not reduced, the goals of the binational program to protect the Lake Superior Basin cannot be met. One commenter stated that, if EPA does not intend to set standards for mercury emissions from industries that currently do nothing to control their emissions and that do not develop control technology on a voluntary basis, its regulations (if not its authority) are inadequate to protect the Great Lakes and other Great Waters from mercury deposition. The commenter stated that EPA's refusal to take action under CAA section 112(m) because authority is available under CAA section 112(d), and then failing to use the CAA section 112(d) authority is unacceptable. Furthermore, the commenter stated that Congress directed the EPA to take action to protect the Great Waters by 1995. The commenter stated that postponing regulations until residual risk standards are required violates the spirit (if not the letter) of the congressional mandate.

One commenter stated that beyond-the-floor standards are warranted for mercury. The commenter stated that a mercury standard based on developing technologies is ''achievable.'' The commenter stated that EPA could base beyond-the-floor mercury standards on the reductions that could be achieved through raw material change (low-mercury ore), fuel change (natural gas), or control technologies (wet scrubbers, carbon beds, or activated carbon injection). The commenter recommended that EPA investigate the COHPAC–TOXECON system, whereby a pulse-jet baghouse is installed downstream from existing ESP controls, and a sorbent injection system is installed between the existing ESP and the baghouse. The commenter also suggested that EPA look at developing multipollutant technologies, such as corona discharge, catalytic oxidation, and iron oxide sorbent systems being tested in Minnesota.

One commenter cited estimated costs for activated carbon systems that were developed for coal-fired boilers that ranged from $4,940 to $70,000 per pound ($9.9 to $140 million/ton) of mercury removed at 90 percent control (USDOE, September 2002; NESCAUM, June 2000). The commenter also provided costs for carbon filter beds used in European waste incinerators of $513 to $1,083 per pound ($1.0 to $2.2 million/ton) of mercury removed at 99 percent control. The commenter stated that the control costs for indurating furnaces should lie somewhere between the two cost ranges. The commenter also provided estimated costs for enhanced wet scrubbing systems for coal-fired boilers of $76,000 to $174,000 per pound ($152 to $348 million/ton) of mercury removed (NESCAUM, June 2000).

Response: There is no way to set a floor standard for mercury that is ''achievable,'' as required by CAA section 112(d)(2), because there is no standard that can be duplicated by different sources or replicable by the same source. The opinion in *National Lime* did not deal with a situation where an emission standard was unachievable for these reasons. Mercury emitted from taconite iron ore processing plants originates primarily from the ore itself and to a much lesser extent the fuels powering the process. None of the taconite iron ore processing plants control mercury emissions by using at-the-stack controls. Thus, any differences in mercury emissions from existing indurating furnaces reflect different mercury levels in raw materials or fossil fuels used at the individual plants. Attempting to base a mercury standard (either a floor standard, or a beyond-the-floor standard) on raw material substitution (*i.e.*, ore substitution), however, would lead to unachievable standards for all sources, because this means of control is not duplicable or even replicable.

A study by the Coleraine Minerals Research Laboratory in 1997 stated that ''the mercury volatilized during pellet induration is not the same for every taconite operation. There is a correlation between the amount of mercury volatilized during induration and the location of the taconite operation. The taconite operations that are located on the west end of the Mesabi Iron Range volatilize more mercury during pellet induration than those on the east end of the range.'' This correlation was confirmed in a report by the Minnesota Department of Natural Resources (Berndt, 2002) with the mercury concentrations present in the ore varying from 21 parts per billion (ppb) at the west end of the range to 0.6 ppb for facilities located on the east end of the range. Each taconite iron ore processing plant is located directly proximate to its own mining source. Transportation costs of procuring raw materials from other locations are prohibitive. A plant has no access to the raw ore used by another plant and, consequently, could not duplicate the mercury emissions performance of the other plant. The ore processing operations at a given plant are dependent on the type of ore mined. The east range ores are typically finer and harder requiring different processing steps in crushing, grinding, and flotation. Because of the differences in processing for each type of ore, it is not feasible for any one facility to process different ores mined from multiple locations in the range. Moreover, because iron ore deposits are variable in mercury content, there is no way to assure that even a source processing its own ore could replicate its own performance, since the next ore batch could contain higher concentrations of mercury. Based on the above justifications, we have determined that it is infeasible for taconite plants to reduce mercury emissions by switching to ''cleaner'' ores.

Natural gas is the primary fuel used by the taconite industry to fuel the process. From the period of 1995 to 1997, the burning of coal constituted only between 9 and 18 percent of the overall energy input for taconite indurating furnaces. During the same period, natural gas constituted between 73 and 83 percent of the overall energy input for taconite indurating furnaces. Although very little coal is used overall by the industry, it is critical for certain plants to have coal available to them as a backup fuel when natural gas may not be available or when seasonal fluctuations in the price of natural gas make its use uneconomical. Therefore, based on the negligible impact of coal on mercury emissions in the industry and the importance of maintaining backup fuel options, fuel switching is not a feasible means of controlling HAP metal emissions (including mercury) for the taconite industry.

Based on these facts, EPA cannot accept the comment that it must establish a floor standard by averaging the lowest mercury emission values of the so-called best-performing 12 percent of sources. In the next performance test, all of these mercury values could be higher (no matter what method would be used to establish ''best performing''), because there are no means of controlling ore concentrations or feasibly using fuel substitution. Such a standard simply could not be achieved by any source. Not only is this not the intent of a technology-based standard, but would result in sources being out-of-compliance and, thus, possibly shutting them down. This is not how MACT was intended to function. ''MACT is not intended * * * to drive sources to the brink of shutdown * * *'' (H.R. Rep. No. 101–490, 101st Cong. 2d sess. 328).

We note further that the mercury in the ore and the fuel is present in trace amounts. The Minnesota Department of Natural Resources stated that ''mercury present in taconite occurs as a trace element, and cannot be eliminated by simply using a different fuel source or by eliminating mercury-bearing components from material to be combusted.'' (Berndt, 2002) This supports the Agency's technical determinations that control via substitutions of feed or fuel is neither feasible nor likely to be effective since random variability in the feed will likely result in equal amounts of mercury being emitted in any case. Indeed, as stated above, it is not clear that even a single source could reliably duplicate its own performance for mercury emissions due to the small amounts emitted and random variabilities in the mercury content of the iron ore.

The commenters themselves acknowledge that viable controls for mercury are not currently available for the taconite industry:

- One commenter stated that ''viable mercury control technologies or strategies may be identified in the very near future.''
- One commenter stated that ''setting a standard would induce the industry to invest in research and development to meet it.'' The commenter also stated that ''promising mercury control technologies for the taconite industry are on the horizon.''
- Two commenters stated that ''control technologies being developed for coal-fired plants could be used to control mercury emissions from taconite facilities.'' Section 112(d) of the CAA requires that the EPA establish emission standards that are ''achievable for new or existing sources.'' Since we have not been able to identify any currently employed operating practices that effectively reduce mercury emissions which are duplicable or replicable, we cannot develop an achievable floor standard.

Some commenters also suggested extended compliance periods (beyond the 3 years provided by section 112(i)(3) of the CAA). The problem, however, is not one of time but of the lack of existence of any means of floor control. Control of emissions via raw material or fuel substitution will not be available regardless of time allowed for compliance.

Several commenters also noted that EPA's action here could undermine efforts to control mercury deposition in the Great Lakes and questioned the adequacy of EPA's action in light of the Agency's obligation under section 112(m)(6) of the CAA to ''determine whether the other provisions of this section 112 are adequate to prevent serious adverse effect to public health and serious or widespread environmental effects'' in the Great Lakes. The EPA, however, is not reopening its existing determination that the section 112(d) and (f) standards are adequate for this purpose. See generally 63 FR 14090 (March 24, 1998); ''Deposition of Air Pollutants to the Great Waters: First Report to Congress (EPA–453/R–93–055, 1994); ''Deposition of Air Pollutants to the Great Waters: Second Report to Congress'' (EPA–453/R–97–011, 1997). The EPA notes further that the section 112(f) residual risk process must evaluate (among other things) whether a more stringent standard for mercury is needed to prevent an adverse environmental effect (taking into consideration costs, energy, safety and other relevant factors).

The commenters' statements regarding potential at-the-stack control options are legitimate considerations for beyond-the-floor standards, but after evaluating the possibility of such controls against technical considerations and the section 112(d)(2) factors, we do not feel that a beyond-the-floor standard for mercury is warranted.

One commenter indicated that different handling practices for captured dust from indurating furnaces, as discussed in a report by the Minnesota Department of Natural Resources (Berndt, 2002), would be a good method for controlling mercury. The control option investigated in the report involves placing magnetite dust collected by the wet scrubbers, which was found to be high in mercury, into the waste stream rather than recycling the dust back to the indurating furnace. A review of the report cited by the commenter reveals that, for the two taconite plants studied, the costs of this approach ranged from $28 to $254 million per ton of mercury removed ($14,000 to $127,000 per pound of mercury removed). This high cost results from the loss of over $1 million of magnetite dust product ($25 per long ton) to prevent approximately 30 pounds of mercury emissions. The study concludes that ''due to the high cost of this emission control method, the large uncertainty in the cost estimates, and the limited amount of emission reduction, it appears that more research is needed before mercury emission control methods can be put into practice in taconite processing facilities.'' We believe that the high cost, the small reduction in HAP emissions, and increased waste disposal do not justify this beyond-the-floor alternative at this time.

Other potential mercury controls cited by the commenters include: wet flue gas desulfurization (FGD), baghouses, activated carbon injection, activated carbon/baghouse system (COHPAC), corona discharge, electro-catalytic oxidation, and injection of copper-coated magnetic taconite concentrate.

Ninety seven percent of the mercury emitted from taconite plants is emitted from the indurating furnaces. The mercury emitted from the taconite indurating furnaces is primarily elemental mercury. Wet scrubbing systems, such as wet FGD, ''are very effective at removing soluble ionic mercury, but are not very effective at removing insoluble elemental mercury'' (NESCAUM, 2000). Therefore, wet FGD systems were not considered to be a technically viable beyond-the-floor option.

Baghouses and control systems that utilize them, such as the COHPAC system, cannot be used on taconite indurating furnace stacks due to the high moisture content of the exhaust gas. The high moisture content of the exhaust gas causes plugging problems that make the baghouses ineffective. Therefore, baghouses and control systems based on baghouse technology were not considered to be a technically viable beyond-the-floor option.

In pilot scale studies at several electricity generating boilers, carbon injection has provided up to a 90 percent reduction in mercury emissions. Estimated costs for installing activated carbon injection systems on electricity generating boilers range from $10 to $140 million per ton of mercury removed ($5,000 to $70,000 per pound of mercury removed) (NESCAUM, 2000; USDOE, 2002). Activated carbon injection has been demonstrated to provide 95 percent control of mercury emissions for municipal waste combustors (NESCAUM, 2000). Costs for installing activated carbon injection for municipal waste combustors range from $0.4 to $1.74 million per ton of mercury reduced ($211 to $870 per pound of mercury reduced). However, NESCAUM points out that ''this working experience with small sources is not directly transferable to large coal-fired boilers because of their different flue gas characteristics'' (NESCAUM, 2000). The cost per pound of mercury removed for this industry with activated carbon injection would be considerably higher than the estimated cost for a utility boiler because the capital and fixed operating costs would be similar while these plants have very low mercury emissions. The high cost, small reduction in HAP emissions, increased energy usage, and additional waste generation do not justify this beyond-the-floor alternative at this time.

The corona discharge, electro-catalytic oxidation, and copper-coated magnetic taconite concentrate injection control technologies are describe by the commenter as ''emerging technologies * * * that could potentially be applied to the taconite sector as they mature and become more cost-effective.'' Based on the commenter's own description, these technologies are not currently ready for application to the taconite industry. Therefore, these technologies were not considered in the beyond-the-floor analysis.

In evaluating these potential beyond-the-floor options, we were unable to identify any viable control technologies or operating practices for achieving reductions in mercury emissions from taconite iron ore plants. Consequently, we chose the floor level of no emissions reduction as MACT.

Since specific controls for mercury are not currently present in the industry and operating practices that effectively reduce mercury emissions have not been identified, we are selecting no emissions reduction as new source MACT.

Asbestos

Comment: Seventeen commenters stated that EPA should set a limit for asbestos emissions from taconite plants as is required by the CAA. One commenter stated that asbestos is designated as a HAP by the CAA. The commenter reasoned that if asbestos is emitted by the taconite industry, the statute requires that EPA set a standard for asbestos fibers. Based on the decision in *Reserve Mining Co.* v. *EPA*, 514 f.2d 492, 526 (1975), the commenter contends that the EPA must consider asbestos to be a HAP emitted by the taconite industry. One commenter contended that ''lack of information'' about asbestos emissions is an invalid reason for not setting standards.

Two commenters asserted that 30 years ago, EPA stated that it intended to regulate asbestos emissions from the taconite industry. The same commenter stated that the 1973 asbestos NESHAP had excluded ''mineral processing operations that may contain asbestos as a contaminant.'' The commenter further pointed out the Congress rejected this approach when it passed the CAA Amendments of 1990.

One of the commenters pointed out that in a 1975 *Reserve Mining* decision, the U.S. Court of Appeals for the Eighth Circuit stated in regard to emissions from the Co. plant (now operated by Northshore) that ''Reserve discharges fibers substantially identical and in some instances identical to fibers of amosite asbestos.'' The trial court heard extensive evidence as to the chemistry, crystallography, and morphology of the cummingtonite-grunerite present in the mined ore. This evidence demonstrated that, at the level of the individual fiber, a portion of Reserve's cummingtonite-grunerite cannot be meaningfully distinguished from amosite asbestos. Reserve attempted to rebut this testimony by showing that the gross morphology of the two minerals differed and the characteristics of the two minerals varied when considered in crystal aggregations. Since, according to the opinions of some experts, the individual fiber probably serves as a carcinogenic agent, the district court viewed the variations in mineralogy as irrelevant and determined that Reserve discharges fibers substantially identical and in some instances identical to amosite asbestos.

One commenter stated that it should be noted in the proposal preamble that only one mine remains operating at the eastern end of the Mesabi Range where acicular (needle-like) minerals may be present in the ore. The commenter also stated that the proposal preamble overstated the efforts of EPA's work group investigation of asbestos in taconite ore. The commenter asserted that the work group is focused mainly on vermiculite and is unlikely to study or recommend ''solutions'' for the taconite industry.

One commenter stated that EPA's refusal to set beyond-the-floor standards for asbestos is unlawful.

Response: Although we are compelled to develop MACT standards for HAP from major sources, and ''asbestos'' is listed as a HAP in section 112(b) of the CAA, ''asbestos'' is not a single chemical substance or an easily identified group of chemicals or substances. Our previous regulatory experience with asbestos as an air pollutant has been limited to those substances commercially used for their properties, such as a high resistance to heat and most chemicals. More recently, the Agency has become concerned with those and similar substances that may occur as a contaminant in other mined materials and then be released into the air during processing activities.

When Congress listed ''asbestos'' as a HAP in section 112(b)(1), it did not further explain the term in the statute, and EPA is not aware of any legislative history addressing the term asbestos. Currently, EPA regulatory definitions for ''asbestos'' are provided in the Asbestos NESHAP, as revised in 1990 (40 CFR 61.141, subpart M), and the regulations for addressing asbestos-containing materials in schools (40 CFR 763.83). Both rulemakings, which focus on commercial asbestos, define asbestos as the asbestiform varieties of six different minerals: chrysotile (serpentinite), crocidolite (riebeckite), amosite (cummingtonite-grunerite), anthophyllite, actinolite, and tremolite. As some commenters have indicated, it is correct that the ore from the eastern end of the Mesabi Range is comprised to some extent of cummingtonite-grunerite and ferroactinolite (an iron-based form of actinolite), two of the above listed asbestos-like minerals.

Similarly, other Federal agencies' standards for ''asbestos,'' for example, the Occupational Safety and Health Administration (OSHA), were developed for commercial asbestos products and not asbestos as a contaminant in another material (29 CFR parts 1910, 1915, and 1926). Current OSHA workplace air regulations apply only to chrysotile, crocidolite, amosite, and the asbestiform varieties of anthophyllite, tremolite, and actinolite. The word asbestos is often added after the mineral (*e.g.*, tremolite asbestos) to signify that the asbestiform variety of the mineral is being referred to. This is not necessary for chrysotile, crocidolite, or amosite because these are terms specific to the asbestiform varieties of the minerals (which are serpentine, riebeckite, and cummintonite-grunerite, respectively).

Since the EPA first regulated asbestos as a HAP, a distinction has been made on applying the term asbestos to commercially manufactured products and not as a contaminant in other materials. When the Asbestos NESHAP was promulgated in 1973, the EPA Administrator made explicit in accompanying comments that the NESHAP only apply to asbestos mines and asbestos mills. Approximately 1 year after the rule was promulgated, EPA further clarified the rule by stating it does not apply to asbestos occurring as a contaminant as distinguished from asbestos as a product (39 FR 15397, May 3, 1974). In a 1974 revision to the Asbestos NESHAP, the Administrator added a definition of ''commercial asbestos'' to distinguish asbestos which is produced as a product from asbestos which occurs as a contaminant in other materials.

Furthermore, when the CAA was amended in 1990, EPA's approach in developing NESHAP was significantly altered through the use of the HAP list under section 112(b) and the application of technology-based standards under section 112(d) instead of a strict risk-based approach. However, the CAA amendments in 1990 did not provide any further guidance on how the definition of asbestos could be applied beyond its use in the Asbestos NESHAP to address asbestos as a contaminant in other materials.[1] Based on EPA's historical use of the term ''asbestos,'' it has been used in the context for commercially produced products and not, as yet, as a contaminant in other products. In summary, there is no technical or regulatory consensus on the set of minerals pertinent to contaminant asbestos.

Notwithstanding the real technical uncertainties as to how to classify the fibers in the Northshore emissions, commenters argued that the issue had already been decided by virtue of the Eighth Circuit's *Reserve Mining* decision, which found that *Reserve Mining* (now Northshore) emitted asbestos for purposes of ordering injunctive relief. First, any suggestion that EPA is now precluded from making a different factual determination is not correct. The issue decided in *Reserve Mining* is different from the one involved here: whether the Northshore fibers are ''asbestos'' for purposes of section 112 (b) of the CAA, a provision not at issue in *Reserve Mining* since it did not even exist at the time of the decision.

Second, EPA is not acting in the context of a plea for general injunctive relief (as in *Reserve Mining*), but rather to implement a limited grant of statutory authority to regulate the HAP ''asbestos.'' We have looked for existing, objective means of determining if Northshore's fibers are ''asbestos'' and currently find the situation uncertain. In light of this uncertainty, we are not establishing MACT standards for the fibers emitted by Northshore. Rather, the issue of which non-commercial fibers are ''asbestos'' for purposes of section 112(b) is one that must first be decided in a broader context.

In response to the events surrounding exposures of residents to asbestos that occurred as a contaminant in a vermiculite mine in Libby, Montana, EPA is currently studying the complex issues involved with asbestos emissions from beneficiation and subsequent processing of minerals where asbestos may be present as a contaminant. One component of this activity is a comprehensive update to the asbestos entry in the Agency's Integrated Risk Information System (IRIS). In the hazard and dose-response assessment pieces of the update, the current information on mineralogy, size, bioactivity and chemistry of different asbestos fibers is being considered. Within the past 3 years, the Agency has sponsored or co-sponsored several technical meetings aimed at bringing together the current knowledge on asbestos, its characteristics and related health effects. These include, but are not limited to:

- May 24–25, 2001, ''Asbestos Health Effects Conference'' in Oakland, California;
- February 25–27, 2003, ''Asbestos Cancer Risk Peer Consultation'' in San Francisco, California; and
- June 12–13, 2003, ''Asbestos Mechanisms of Toxicity Workshop'' in Chicago, Illinois. Integration of the information gathered through these and other mechanisms will compose the

[1] We thus disagree with the commenter who stated, without citation, that the 1990 amendments to the CAA were intended to compel section 112(d) standards to control the fibers emitted from non-commercial sources. The commenter is correct in that section 112 is not limited to commercial asbestos emissions, but nothing in the statute or its legislative history of which EPA is aware indicate that Congress intended a particular meaning of ''asbestos'' or that particular fiber-emitting sources be regulated under section 112 by virtue of the inclusion of ''asbestos'' in the list of HAP.

support documents for the new IRIS file and will assist us in decisionmaking regarding contaminant asbestos.

As part of the response to the findings in Libby, the Agency has developed an action plan which identifies steps necessary to gather the information needed to decide whether regulations for sources of contaminant asbestos emissions are warranted. The action plan specifies vermiculite mining and processing operations as the first area of focus. Contrary to one commenter's assertion, the action plan also includes plans to assess emissions, exposure and risk associated with asbestos that occurs as a contaminant from other mining and processing operations, including taconite ore mining and processing. That assessment will inform decisions on specific risk-based regulation of asbestos that occurs as a contaminant in taconite ore mining and processing. Specific risk-based emission limitations for asbestos are not included in the technology-based final rule.

In addition, an International Fiber Symposium was held in St. Paul, MN in April 2003. The papers presented at the symposium are in a peer-review process and will then be published. Once the proceedings are published, the Minnesota Department of Health (MDH) will determine if they can conduct a risk assessment for fibers or if they can draw any conclusions about the potential health impacts from fibers. Based on MDH's findings, the MPCA and Minnesota Department of Natural Resources may make policy changes with respect to fibers. Until then, MPCA will continue to regulate airborne fibers from Northshore as required by the court who deemed the fibers a health concern.

Finally, we note that Northshore is in fact controlling emissions of its fibers in part with baghouses, which are the optimum control technology for air emission of fibers (a point made, among other places, in the *Reserve Mining* decision itself). Since the *Reserve Mining* decision, ambient air monitoring around the plant has demonstrated a significant reduction in fiber emissions through the installation of high efficiency baghouses on ore crushing and handling emission units and wet ESP on the indurating furnace exhaust stacks. Baghouses are not a control option for indurating furnaces due to the high moisture content (10 to 15 percent) in the exhaust gases. The high moisture content causes PM to cake and plug the filtering material causing filters to be ineffective. In addition, further reductions in fiber emissions are expected through compliance with the PM emission standards in the final rule. Representatives at Northshore have indicated that existing emission units equipped with multiclones are likely to be replaced with more efficient PM control devices in order to comply with the PM emission standards in the final rule. Northshore representatives provided us with the estimated costs for such an equipment upgrade, and these control costs are reflected in our revised cost impacts for the final rule.

Formaldehyde

Comment: One commenter stated that EPA has a statutory obligation to set emission standards for formaldehyde. The commenter asserted that the standard for formaldehyde must be at least as stringent as the average formaldehyde emission level of the five best performing plants. The commenter stated that whether or not there are feasible control technologies for formaldehyde is irrelevant.

Response: As EPA stated at proposal, formaldehyde (and other organic HAP) are emitted in very low concentrations by taconite processing indurating furnaces, not because these organic HAP are contained in feed or fuel input to the process, but rather as products of incomplete combustion (PIC) necessarily generated when fossil fuels are burned (in any type of process, not just in indurating furnaces) (67 FR 77570). Formaldehyde from indurating furnace emissions has been measured through stack testing at concentrations that are typically less than 1 part per million (ppm).

The EPA stated somewhat inaccurately at proposal that formaldehyde emissions from indurating furnaces are currently uncontrolled. It is clear from context that we meant that there are no current ''at-the-stack'' controls for formaldehyde (and other PIC) emissions from these furnaces, although control of the combustion process minimizes PIC (including formaldehyde) formation and hence PIC emissions. We reiterate that at-the-stack controls in place to control PM emissions have no effect on PIC emissions. We also know of no feasible at-the-stack control technology for reducing formaldehyde emissions at these extremely low concentrations and at the exhaust gas temperatures typically encountered at indurating furnaces.

The only known technology for the control of formaldehyde emissions at concentrations of less than 1 ppm is thermal catalytic oxidation, in which formaldehyde is contacted with a precious metal catalyst in the presence of oxygen and high temperature (650 to 1,350 °F) to yield carbon dioxide and water. Destruction efficiencies of 85 to 90 percent have been demonstrated on formaldehyde emissions contained in the exhaust gas from stationary combustion turbines at concentrations in the parts per billion range and temperatures of 1,000 °F or higher. Destruction efficiencies, however, decrease exponentially at reaction temperatures below 650 °F, reaching less than 10 percent at exhaust gas temperatures of 300 °F or lower, which is typical of most indurating furnaces. Burning large quantities of additional fuel, such as natural gas, to heat the exhaust gases to the desired temperature would generate large additional quantities of carbon dioxide (a gas potentially connected to global climate change) and NO_X (ozone precursors). As at proposal, given the significant issues of technical feasibility and adverse environmental impacts associated with use of this technology, it is not the proper basis for MACT standards (67 FR 77571).

We also reiterate that fuel switching is not a justifiable means of control. Most indurating furnaces currently utilize natural gas as a fuel, and PIC emissions are higher for natural gas than for coal, but switching to coal would increase emissions of HAP metals in much larger amounts than the minimal PIC emissions attributable to natural gas burning. See S. Rep. 101–228, 101st Cong. 1st sess. at 168 (''In cases where control strategies for two or more different pollutants are in actual conflict, the Administrator shall apply the same principle—maximum protection of human health shall be the objective test.'')

Consequently, the only form of control currently used and feasible to minimize formaldehyde emissions is the proper and efficient operation of an indurating furnace with GCP. It is clear from the low measured levels of formaldehyde emitted from these furnaces that this means of control is highly effective.

In general, good efficiency of a combustion device is governed by time, temperature, and turbulence, the three ''T's'' of combustion. Efficient combustion is achieved when a selected fuel reaches an optimum temperature for a minimum residence time with sufficient turbulence to allow oxidation of all organic compounds to completely react to the products of combustion—water and carbon dioxide. However, there are many phenomena associated with combustion that lead to the formation of PIC. Examples of possible phenomena include: Unburned fuel, quenches or cool zones in the combustion area, fuel rich zones, low combustion temperatures, insufficient air (oxygen) contact with fuel due to limited turbulence, and changes to the combustion process due to load swings or feed changes.

Good combustion practices typically encompass several elements such as the proper operation of the combustion process, routine inspection and performance analysis of the process, and preventative maintenance. More specific examples of GCP indicating the range of existing practices are listed below:

- Maintain operator logs;
- Develop procedures for startup, shutdown, and malfunction;
- Perform periodic evaluations or inspections;
- Perform burner or control adjustments/tune-ups;
- Monitor and maintain concentrations of carbon monoxide (CO), oxygen (O_2), or carbon dioxide (CO_2) in compliance with site-specific concentration limits in the combustion exhaust;
- Monitor and maintain combustion temperatures above a site-specific minimum value;
- Monitor fuel/air metering;
- Comply with a CO or total organic carbon (TOC) emission limit;
- Maintain proper liquid fuel atomization;
- Monitor fuel quality and handling procedures;
- Maintain combustion air distribution; and
- Maintain fuel dispersion.

Although all indurating furnaces need to use GCP to minimize PIC emissions, determining what precisely is GCP involves site-specific determinations for each furnace. For example, some indurating furnaces have been required to install NO_X emission controls such as low NO_X burners. The basic method used in reducing NO_X emissions is a reduction in combustion temperature, which is the opposite strategy needed for minimizing PIC (*i.e.*, increasing combustion temperature). Thus, due to differences in furnace design, operation, firing fuel, process controls, and air pollution control equipment, one set of GCP established for one type of indurating furnace may be different from those needed for another type of indurating furnace.

In addition, State operating permits for the taconite indurating furnaces do not require any specific set of GCP. However, based on discussions held with industry representatives, all sources already use a wide variety of work practices (*e.g.*, existing Standard Operating Procedures) to maintain proper and efficient operation of each indurating furnace. See the July 11, 2003 memorandum, ''Meeting Minutes on Good Combustion Practices with Taconite Industry Representatives.'' Sources have a strong and inherent economic incentive to ensure that fuel is not wasted, and that the combustion device operates properly and is appropriately maintained. The lack of a uniform approach to assuring combustion efficiency is not surprising given the differences of indurating furnace designs, and the fact that existing Federal/State standards do not include GCP requirements for indurating furnaces.

Thus, we have determined that site-specific GCP are the MACT floor for formaldehyde emissions from existing sources. In evaluating potential beyond-the-floor options, we considered the only known at-the-stack technology for the control of formaldehyde emissions at concentrations of less than 1 ppm—thermal catalytic oxidation, which was described earlier. However, as discussed previously, given the significant issues of technical feasibility (*e.g.*, low exhaust gas temperatures, high volumetric flow rates of exhaust gas, and low concentrations of formaldehyde), adverse environmental impacts in the form of increased energy use, and the tremendous additional cost associated with use of this technology, we determined that a standard based on use of thermal catalytic oxidation was not a viable beyond-the-floor option. Since there is no other form of emission control or work practice to control formaldehyde emissions from indurating furnaces, the site-specific GCP documented in the operation and maintenance plan were also determined as the MACT floor for formaldehyde emissions from new indurating furnace sources.

We further find that under CAA section 112(h)(1), it is not feasible to prescribe or enforce an emission standard for HAP because at-the-stack controls are not feasible (as explained earlier), and monitoring parameters related to GCP can only meaningfully result in minimization of PIC emissions if such monitoring parameters are quantified on a site-specific basis.

Since it is not possible to identify any uniform requirements or set of work practices that would meaningfully reflect the use of GCP, the final rule requires each source to identify site-specific work practices for each indurating furnace and to document these GCP in an operation and maintenance plan in accordance with § 63.9600 of the final rule. A GCP control strategy could include a number of combustion conditions and work practices which, applied collectively, promote good combustion performance and minimize the formation of formaldehyde/PIC emissions. Thus, the MACT requirement for these sources is to use GCP, and for each source to develop an operation and maintenance plan that details appropriate operating parameters for each of the following elements of GCP, or explains why such operating parameters are either inappropriate or unnecessary for the source (''inappropriate'' or ''unnecessary'' to be determined by the degree to which PIC formation from fuel combustion in the furnace is minimized):

- Proper operating conditions for each indurating furnace (*e.g.*, minimum combustion temperature, maximum CO concentration in the furnace exhaust gases, burner alignment, or proper fuel-air distribution/mixing).
- Routine inspection and preventative maintenance and corresponding schedules of each indurating furnace.
- Performance analyses of each indurating furnace.
- Keeping applicable operator logs.
- Keeping applicable records to document compliance with each element.

A source's compliance with its startup, shutdown, and malfunction plan also will contribute to GCP.

A final determination that the values established in the operation and maintenance plan are appropriate GCP for the source would then be achieved by submitting the plan to the Administrator on or before the compliance date that is specified in § 63.9583 of the final rule for the affected source. The operation and maintenance plan must explain why the chosen elements and work practices are considered GCP for the affected source. The quantified parameters (*e.g.*, furnace operating temperature) contained in the plan become enforceable operating conditions unless and until the Administrator acts to establish new parameters.

The Administrator will evaluate the demonstration and determine whether the chosen elements and work practices minimize the formation of formaldehyde (and other PIC) and so constitute GCP for the furnace. The Administrator will review the adequacy of the site-specific procedures and the records to demonstrate that the plan constitutes GCP. If the Administrator determines that any portion of the plan is not adequate, we can reject those portions of the plan and request additional information addressing the relevant issues.

Finally, with respect to the commenter's point that EPA is obligated to establish MACT standards for formaldehyde, EPA has established such standards, based on GCP implemented by means of an operation and maintenance plan and site-specific determinations through the permitting process, as explained above.

HCl and HF

Comment: One commenter stated that EPA has a clear statutory obligation to set emission standards for each listed HAP, including HCl and HF. The commenter asserted that, just because plants are achieving some incidental control of acid gases, it does not free EPA of its statutory obligation to set a specific emission limit for HCl and HF. Two commenters stated that EPA must set a standard for HCl and HF that reflects, at a minimum, the average emission level achieved by the five best performing plants. One commenter cited the *National Lime* opinion which states "The CAA requires EPA to set MACT floors upon the average emission limitation achieved; it nowhere suggests that this achievement must be the product of specific intent."

One commenter stated that EPA's rejection of beyond-the-floor standards for HCl and HF is not logical when a technology is available and substantially reduces HAP. The commenter contended that available acid gas control technology would yield a far greater degree of reduction than is required by EPA's proposed standards, which require no reduction at all.

Response: Acid gases (HCl and HF) are formed in the indurating furnace due to the presence of chlorides and fluorides in pellet additives, such as dolomite and limestone, as well as in the ore bodies. The taconite industry has not installed equipment specifically for the purpose of controlling acid gases from indurating furnace stacks, but, as the commenters correctly note, intent is irrelevant in determining HAP control (*National Lime*). What matters is the extent of control, where control in fact occurs. Test data for HCl and HF emissions were available from seven indurating furnaces at six taconite plants. Since most of the furnaces have multiple stacks, these tests represent emissions from fifteen control devices: 8 venturi scrubbers, 2 multiclones, 3 dry ESP, and 2 wet ESP. These data show that, except for emissions from stacks controlled with multiclones, HCl and HF are emitted from indurating furnaces at very low concentrations, typically less than 3 ppm.

Of the six plants for which HCl and HF test data were available, three plants conducted PM emissions tests concurrently with the HCl and HF tests. These tests represent emissions from 3 furnaces and 8 emission control devices: 4 venturi scrubbers, 2 multiclones, and a dry ESP/wet ESP ducted together. An analysis of the HCl and HF emissions data and the corresponding PM emissions data indicates that, for this industry, there is a correlation between acid gas and PM emissions from control devices on indurating furnaces. Specifically, the data indicate that stacks with higher PM emissions also have higher acid gas emissions, and likewise, stacks with lower PM emissions have lower acid gas emissions ("Correlation of Acid Gas Emissions to PM Emissions for Taconite Indurating Furnaces," July 2003). Consistent with this correlation, the best performing sources for PM are also the best performing for acid gas emissions.

There is an engineering basis for this correlation. Due to the strong affinity of acid gases for water, PM control equipment that uses water, such as wet scrubbers and wet ESP, has the capability of reducing HCl and HF emissions substantially. Therefore, wet scrubbers and wet ESP control technologies used for the reduction of PM emissions from taconite indurating furnaces to achieve the MACT level of control for HAP metals are expected to achieve a reduction of acid gas emissions as well. Standards requiring good control of PM emissions for this industry will also achieve control of acid gas emissions. For the taconite industry, PM emissions can be used as a surrogate for the acid gases emitted from taconite indurating furnaces. Therefore, we are establishing standards for total PM as a surrogate pollutant for the acid gases, HCl and HF. This finding is valid only for these taconite indurating furnace data; data for other industries may not show a correlation between acid gas emissions and PM emissions. Therefore, this finding should not be used as a precedent in other rulemakings.

Establishing separate standards for acid gases would impose costly and significantly more-complex compliance and monitoring requirements. In addition, establishing separate standards for acid gases would achieve little, if any, HAP emissions reductions beyond what would be achieved using the total PM surrogate pollutant approach. Consequently, EPA has chosen to establish a standard for acid gases using the PM surrogate. Therefore, the MACT floor level of control for acid gases is equivalent to (and expressed as) the MACT floor level of 0.01 gr/dscf for PM.

We then examined the beyond-the-floor option. The next increment of control beyond the floor is the installation of venturi scrubbers or dry ESP capable of meeting a PM concentration limit of 0.006 gr/dscf, which is equivalent to the level of PM control required for new furnaces. We estimate the additional capital cost of going from the MACT level of 0.01 gr/dscf for PM to 0.006 gr/dscf to be $99.7 million per year. We estimate the corresponding additional reduction in acid gases achieved by this PM level to be 112 tons of acid gases. The cost per ton of acid gas is $890,000/ton. The energy increase would be expected to be 53,436 mega-watt hours per year, primarily due to the energy requirements of new wet scrubbers and dry ESP. (Beyond-the-Floor Analysis for Acid Gases, July 2003). The high cost, the small reduction in HAP emissions, and the additional energy requirements do not justify this beyond-the-floor alternative for acid gases. Consequently, we chose the MACT floor level of control for PM of 0.01 gr/dscf as the existing indurating furnace MACT for acid gases. New source MACT for acid gases is equivalent to the PM new source MACT level of 0.006 gr/dscf.

By establishing a standard for acid gases, we have addressed the commenters' point that the Agency is legally obligated to do so.

PM as a Surrogate for Metallic HAP

Comment: One commenter asserted that EPA cannot use a surrogate when doing so would result in regulations that do not include emission standards for each listed HAP or in standards that do not at least match the average emission level that the best sources achieve. The commenter pointed out that the Court has already held that the use of PM as a surrogate for non-mercury metals is not reasonable and, therefore, not lawful where factors other than PM control affect emissions of such metals (*National Lime*). The commenter reasoned that, since each plant's actual metallic HAP emission levels are influenced not just by PM control technology but also to a very large extent by the HAP metal content in the ore used, the use of PM as a surrogate for non-mercury metals is unlawful.

The commenter stated that, in the past, EPA has recognized that it can set standards for groups of metals that behave similarly (for example, in the hazardous waste combustors rule). The commenter asserted that EPA has no basis for assuming that its only two options are either to set a PM standard for all HAP or to set individual emission standards for each HAP. The commenter stated that EPA must explain why it cannot set emission standards for groupings of metals or for representative surrogate metals rather than just a PM standard.

The commenter explained that the correlation of PM to any given metal varies with the volatility of the metal in question; therefore, EPA cannot assume that all the metals emitted by taconite plants will consistently behave as PM. The commenter stated that different PM control devices have different collection efficiencies for different metals. Therefore, the commenter stated that, even if all taconite plants had identical HAP metal input, EPA could not assume that any two plants have identical (or even similar) emission rates for any given metal.

Two commenters supported using PM as a surrogate for total HAP emissions. The commenters stated that ''it is far more appropriate to use PM for total metal HAP than to attempt to specialty individual metal HAP. The earthen material that is processed is not necessarily identical in composition in each and every shovelful of material. It would be impossible to account for differences in individual HAP metal content for each load processed.''

Response: We disagree with the first commenter; PM is a valid surrogate for the HAP metal compounds emitted from taconite iron ore processing plants. As indicated in the preamble to the proposed rule, metallic HAP are emitted from ore crushing and handling units, indurating furnaces, finished pellet handling units, and ore dryers. We determined that it is not practical to establish individual standards for each metallic HAP that could be present in the various processes (*e.g.*, separate standards for manganese compound emissions, separate standards for lead compound emissions, and so forth for each metal compound group listed as HAP that is potentially present).

A key parameter for the control of both semi-volatile and non-volatile metal compounds is the operating temperature of the air pollution control device that is applied. At temperatures of 200 to 400 °F, the range typical of control devices applied to emissions from taconite indurating furnaces, any semi-volatile and non-volatile HAP metal compounds present, except elemental mercury, would exist in the form of fine PM and, therefore, would be controlled in direct relationship to PM. As a result, strong correlations exist between PM emissions and emissions of the individual metallic HAP compounds. Control technologies used for the reduction of PM emissions achieve comparable levels of reduction of metallic HAP emissions. Standards requiring good control of PM emissions will also achieve a similar level of control of metallic HAP emissions. Therefore, we are establishing standards for total PM as a surrogate pollutant for the individual metallic HAP. Establishing separate standards for each metallic HAP would impose costly and significantly more complex compliance and monitoring requirements. In addition, establishing separate standards for each metallic HAP would achieve little, if any, HAP emissions reductions beyond what would be achieved using the total PM surrogate pollutant approach.

IV. Summary of Environmental, Energy, and Economic Impacts

The environmental, energy, and economic impacts of the final rule are based on the replacement of poor performing controls at existing sources with new controls capable of meeting the emission limits established in the final rule. We did not estimate impacts for new sources since we do not project any new or reconstructed affected sources becoming subject to the new source MACT requirements in the foreseeable future. Specifically, we anticipate that two plants will install new impingement scrubbers on a total of 33 out of the 264 ore crushing and handling emission units to meet the PM emission limit. We expect that four plants will install new venturi-rod wet scrubbers or will upgrade existing wet scrubbers on at least one of their indurating furnaces. In total, we estimate that the existing controls will be replaced with new venturi-rod wet scrubbers on three of the 47 indurating furnace stacks. We estimate that the existing controls will be upgraded with new components on eight of the 47 indurating furnace stacks. We anticipate that four plants will install new impingement scrubbers on a total of 11 out of the 82 finished pellet handling emission units to meet the finished pellet handling PM emission limit.

A. What Are the Air Emission Impacts?

The installation of new controls and upgrades discussed in the preceding paragraph will result in reductions in emissions of metal HAP, acid gases, and PM. Overall, the final standards are expected to reduce HAP emissions by a total of 270 tpy, a reduction of about 43 percent. Metallic HAP emissions will be reduced by 14 tpy (a 42 percent reduction) and acid gas emissions (HCl and HF) will be reduced by 256 tpy (a 51 percent reduction). In addition, the final standards are expected to reduce PM emissions by 10,538 tpy, a reduction of about 62 percent.

B. What Are the Cost Impacts?

The total installed capital costs to the industry for the installation of control equipment are estimated to be $57 million. Total annualized costs are estimated at $9 million/yr, which includes $4.5 million/yr in capital recovery costs, $3.2 million/yr in emission control device operation and maintenance costs, and $0.9 million/yr for monitoring, recordkeeping and reporting. These costs are based on the installation of new wet scrubbers on 33 ore crushing and handling units, three indurating furnace stacks, and 11 finished pellet handling units. The costs are also based on upgrading two wet scrubbers and six ESP for indurating furnaces. In addition, the estimate includes the cost of bag leak detection systems for baghouses, CPMS for scrubbers and wet ESP, and COMS for dry ESP.

C. What Are the Economic Impacts?

We prepared an economic analysis to evaluate the impact the final rule will have on the producers and consumers of taconite and society as a whole. The taconite industry consists of eight companies owning eight mining operations, concentration plants, and pelletizing plants. The total annualized social cost of the final rule is $8.6 million (in 2002 dollars), which is almost the same as the total annualized compliance cost. This cost is distributed among consumers (mainly steel mills) who may buy less and/or spend more on taconite iron ore as a result of the Taconite NESHAP, including merchant taconite producers that sell their output on the market, integrated iron and steel plants that produce and consume the taconite captively within the company, steel producers that use electric arc furnace (EAF) technology to produce steel from scrap, and foreign producers. Consumers incur $2.8 million of the total social costs, merchant producers incur $3.7 million in costs, and integrated iron and steel producers incur $4.5 million in costs. The EAF producers and foreign producers enjoy a net gain in revenues of $1.1 million and $1.3 million, respectively.

Our analysis indicates that the taconite iron ore market will experience minimal changes in the price and quantity of ore produced, and in the prices and quantities of steel mill products (some of which are produced using taconite). Prices in the taconite iron ore market are estimated to increase by 0.17 percent while production may decrease by 0.14 percent. The price of steel mill products is projected to increase by less than 4/1000th of 1 percent and the quantity produced is projected to change by less than 3/1000th of 1 percent. The EAF steel producers who make steel from scrap rather than iron ore are projected to increase their output by approximately 15/100th of 1 percent in response to the slight increase in the price of steel mill products. While the market overall shows minimal impacts associated with the final rule, the financial stability of the firms operating in this market is very uncertain. The past few years have been a period of tremendous change in the iron and steel industry, during which more than 29 companies in the industry have declared bankruptcy, several plants have closed, and EAF technology has secured a growing share of the market. These changes have occurred due to evolving economic conditions, both domestically and abroad, and technological developments within the industry. Conditions continue to be challenging for iron and steel producers. In an assessment of the impacts on the companies owning taconite plants, we find the estimated costs of the final rule are uniformly less than 1 percent of baseline sales revenues, and typically less than 3 percent of baseline profits. However, four of the companies had negative operating income in 2002, a period of time during in which the entire Nation experienced lower than the historical average for economic activity. A number of companies owning taconite plants have filed for protection under Chapter 11 of the bankruptcy code since 2001. Thus, there is reason to be concerned about the financial condition of companies owning taconite plants. The incremental effect of the final rule on firm financial stability, however, is projected to be very small.

We also prepared a sensitivity analysis that examined the regional impacts of the final rule. All the taconite production plants are located within four counties in Minnesota and one in Michigan. Thus, the impacts of the final rule are expected to be concentrated geographically. We modeled the supply and demand linkages of the various industries and households within each county to estimate changes that may occur in the region as the taconite industry complies with the final NESHAP. We estimate that as industries that interact with the taconite industry (such as construction and earth moving equipment industries) react to the changes in the taconite market, and as household incomes are reduced as a result of changes in all the various industries in the region, the impact of the final rule will add approximately $0.4 million in economic cost to the region. This represents approximately 2/100ths of 1 percent of total sales in those counties. Thus, even though the impacts are concentrated in only five counties, we believe that the impacts on those county economies will not be very large.

For more information on these economic impacts, please refer to the economic impact analysis that is in the final rule docket (ID No. OAR–2002–0039).

D. What Are the Non-Air Health, Environmental, and Energy Impacts?

We project that the implementation of the final rule will increase water usage by 8 billion gallons per year industrywide. This increased water usage is expected to result from the installation of new wet scrubbers needed for compliance. Much of this water will be discharged as scrubber blowdown to the tailings basin(s) located at each plant. At two or more of the affected facilities, there is the potential that this increased wastewater burden will result in new or aggravated violations of permitted wastewater discharge limits from the tailings basins unless significant measures are taken to install new or upgrade existing wastewater treatment systems. The energy increase is expected to be 14,309 megawatt-hours per year, primarily due to the energy requirements of new wet scrubbers.

V. Statutory and Executive Order Reviews

A. Executive Order 12866: Regulatory Planning and Review

Under Executive Order 12866 (58 FR 51735, October 4, 1993), the EPA must determine whether the regulatory action is ''significant'' and, therefore, subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Executive Order defines a ''significant regulatory action'' as one that is likely to result in a rule that may:

(1) Have an annual effect on the economy of $100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;

(2) create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;

(3) materially alter the budgetary impact of entitlement, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or

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

It has been determined that the final rule is not a ''significant regulatory action'' under the terms of Executive Order 12866, and is, therefore, not subject to OMB review.

B. Paperwork Reduction Act

The information collection requirements in the final rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The information requirements are not enforceable until OMB approves them.

The information requirements are based on notification, recordkeeping, and reporting requirements in the NESHAP General Provisions (40 CFR part 63, subpart A), which are mandatory for all operators subject to NESHAP. These recordkeeping and reporting requirements are specifically authorized by section 112 of the CAA (42 U.S.C. 7414). All information submitted to the EPA pursuant to the recordkeeping and reporting requirements for which a claim of confidentiality is made is safeguarded according to Agency policies in 40 CFR part 2, subpart B.

The final rule requires applicable one-time notifications required by the General Provisions for each affected source. As required by the NESHAP General Provisions, all plants must prepare and operate by a startup, shutdown, and malfunction plan. Plants are also required to prepare an operation and maintenance plan for control devices subject to operating limits, a monitoring plan for baghouses and CPMS, a fugitive emissions control plan, and a performance testing plan. Records are required to demonstrate continuous compliance with the monitoring, operation, and maintenance requirements for control devices and monitoring systems. Semiannual compliance reports also are required. These reports must describe any deviation from the standards, any period a continuous monitoring system was ''out-of-control,'' or any startup, shutdown, or malfunction event where actions taken to respond were inconsistent with the startup, shutdown, and malfunction plan. If no deviation or other event occurred, only a summary report is required. Consistent with the General Provisions, if actions taken in response to a startup, shutdown, or malfunction event are not consistent with the plan, an immediate report must be submitted within 2 days of the event with a letter report 7 days later.

The annual public reporting and recordkeeping burden for this collection of information (averaged over the first 3 years after October 30, 2003 is estimated to total 111 labor hours per year at a total annual cost of 920,722, including labor costs, monitoring equipment capital costs, and operation and maintenance costs. Total capital costs associated with the monitoring equipment is estimated at $4,576,955. The total annualized cost of the monitoring equipment is estimated at $392,751. This estimate includes the capital, operating, and maintenance costs associated with the installation and operation of the monitoring equipment.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the purpose of collecting, validating, and verifying information, processing and maintaining information, and disclosing and providing information; adjust the existing ways to comply with any previously applicable instructions and requirements; train personnel to respond to a collection of information; search data sources; complete and review the collection of information; and transmit or otherwise disclose the information.

An Agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid OMB control number. The OMB control numbers for EPA's regulations are listed in 40 CFR part 9. When this ICR is approved by OMB, the Agency will publish a technical amendment to 40 CFR part 9 in the **Federal Register** to display the OMB control number of the approved information collection requirements contained in the final rule.

C. Regulatory Flexibility Act

The EPA has determined that it is not necessary to prepare a regulatory flexibility analysis in connection with the final rule. The EPA has also determined that the final rule will not have a significant economic impact on a substantial number of small entities. For purposes of assessing the impacts of today's final rule on small entities, small entity is defined as: a small business according to the U.S. Small Business Administration (SBA) size standards for NAICS code 21221 (Taconite Iron Ore Processing Facilities) of 500 or fewer employees; (2) a small governmental jurisdiction that is a government of a city, county, town, school district or special district with a population of less than 50,000; and (3) a small organization that is any not-for-profit enterprise which is independently owned and operated and is not dominant in its field.

After considering the economic impacts of today's final rule on small entities, EPA has concluded that this action will not have a significant economic impact on a substantial number of small entities. Based on the SBA size category for this source category, no small businesses are subject to the final rule and its requirements.

D. Unfunded Mandates Reform Act

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and tribal governments, in the aggregate, or by the private sector, of $100 million or more in any 1 year. Before promulgating an EPA rule for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least-burdensome alternative that achieves the objectives of the final rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least-costly, most cost-effective, or least-burdensome alternative if the Administrator publishes with the final rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that may significantly or uniquely affect small governments, including tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant Federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final rule contains no Federal mandate (under the regulatory provisions of the UMRA) for State, local, or tribal governments. The EPA has determined that the final rule does not contain a Federal mandate that may result in expenditures of $100 million or more for State, local, and tribal governments, in the aggregate, or the private sector of $100 million or more in any 1 year. Thus, the final rule is not subject to the requirements of sections 202 and 205 of the UMRA. The EPA has also determined that the final rule contains no regulatory requirements that might significantly or uniquely affect small governments. Thus, today's final rule is not subject to the requirements of section 203 of the UMRA.

E. Executive Order 13132: Federalism

Executive Order 13132 (64 FR 43255, August 10, 1999) requires EPA to develop an accountable process to ensure ''meaningful and timely input by State and local officials in the development of regulatory policies that have federalism implications.'' ''Policies that have federalism implications'' is defined in the Executive Order to include regulations that have ''substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.''

The final rule does not have federalism implications. It will not have substantial direct effects on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. None of the affected facilities are owned or operated by State governments. Thus, Executive Order 13132 does not apply to the final rule.

F. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments

Executive Order 13175 (65 FR 67249, November 9, 2000) requires EPA to develop an accountable process to ensure ''meaningful and timely input by tribal officials in the development of regulatory policies that have tribal implications.''

The final rule does not have tribal implications, as specified in Executive Order 13175. It will not have substantial direct effects on tribal governments, on the relationship between the Federal government and Indian tribes, or on the distribution of power and responsibilities between the Federal government and Indian tribes. No tribal governments own facilities subject to the Taconite NESHAP. Thus, Executive Order 13175 does not apply to the final rule.

G. Executive Order 13045: Protection of Children From Environmental Health and Safety Risks

Executive Order 13045 (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is determined to be ''economically significant,'' as defined under Executive Order 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, EPA 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.

The EPA interprets Executive Order 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 Executive Order has the potential to influence the regulation. The final rule is not subject to Executive Order 13045 because it is based on control technology and not on health or safety risks.

H. Executive Order 13211: Actions That Significantly Affect Energy Supply, Distribution, or Use

The final rule is not subject to Executive Order 13211 (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

I. National Technology Transfer Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Public Law No. 104–113; 15 U.S.C. 272 note) directs EPA to use voluntary consensus standards in their regulatory and procurement 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) developed or adopted by one or more voluntary consensus bodies. The NTTAA directs EPA to provide Congress, through annual reports to OMB, with explanations when an agency does not use available and applicable voluntary consensus standards.

The final rule involves technical standards. The EPA cites the following standards in the final rule: EPA Methods 1, 2, 2F, 2G, 3, 3A, 3B, 4, 5, and 17. Consistent with the NTTAA, EPA conducted searches to identify voluntary consensus standards in addition to these EPA methods. No applicable voluntary consensus standards were identified for EPA Methods 2F and 2G, and none were brought to our attention in comments.

The voluntary consensus standard ASME PTC 19–10–1981—Part 10, ''Flue and Exhaust Gas Analyses,'' is cited in the final rule for its manual method for measuring the oxygen, carbon dioxide, and carbon monoxide content of exhaust gas. This part of ASME PTC 19–10–1981—Part 10 is an acceptable alternative to Method 3B.

The search for emissions measurement procedures identified 14 voluntary consensus standards. The EPA determined that 12 of these 14 standards identified for measuring emissions of the HAP or surrogates subject to emission standards in the final rule were impractical alternatives to EPA test methods for the purposes of the final rule. Therefore, EPA does not intend to adopt these standards for this purpose. The reasons for this determination for the 12 methods are available in the docket.

Two of the 14 voluntary consensus standards identified in this search were not available at the time the review was conducted for the purposes of the final rule because they are under development by a voluntary consensus body: ASME/BSR MFC 13M, ''Flow Measurement by Velocity Traverse,'' for EPA Method 2 (and possibly 1); and ASME/BSR MFC 12M, ''Flow in Closed Conduits Using Multiport Averaging Pitot Primary Flowmeters,'' for EPA Method 2.

Sections 63.9621 and 63.9622 to 40 CFR part 63, subpart RRRRR, list EPA testing methods included in the final rule. Under §§ 63.7(f) and 63.8(f) of subpart A of the General Provisions, a source may apply to EPA for permission to use alternative test methods or alternative monitoring requirements in place of any EPA testing methods, performance specifications, or procedures.

J. Congressional Review Act

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

List of Subjects in 40 CFR Part 63

Environmental protection, Air pollution control, Hazardous substances, Reporting and recordkeeping requirements.

Dated: August 25, 2003.

Marianne Lamont Horinko,

Acting Administrator.

■ For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is amended as follows:

PART 63—[AMENDED]

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

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

■ 2. Part 63 is amended by adding subpart RRRRR to read as follows:

Subpart RRRRR—National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing

Continuous Compliance Requirements

Notifications, Reports, and Records

Other Requirements and Information

Tables to Subpart RRRRR of Part 63

What This Subpart Covers

§ 63.9580 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for taconite iron ore processing. This subpart also establishes requirements to demonstrate initial and continuous compliance with all applicable emission limitations (emission limits and operating limits), work practice standards, and operation and maintenance requirements in this subpart.

§ 63.9581 Am I subject to this subpart?

You are subject to this subpart if you own or operate a taconite iron ore processing plant that is (or is part of) a major source of hazardous air pollutant (HAP) emissions on the first compliance date that applies to you. Your taconite iron ore processing plant is a major source of HAP if it emits or has the potential to emit any single HAP at a rate of 10 tons or more per year or any combination of HAP at a rate of 25 tons or more per year.

§ 63.9582 What parts of my plant does this subpart cover?

(a) This subpart applies to each new and existing affected source at your taconite iron ore processing plant.

(b) The affected sources are each new or existing ore crushing and handling operation, ore dryer, indurating furnace, and finished pellet handling operation at your taconite iron ore processing plant, as defined in § 63.9652.

(c) This subpart covers emissions from ore crushing and handling emission units, ore dryer stacks, indurating furnace stacks, finished pellet handling emission units, and fugitive dust emissions.

(d) An ore crushing and handling operation, ore dryer, indurating furnace, or finished pellet handling operation at your taconite iron ore processing plant is existing if you commenced construction or reconstruction of the affected source before December 18, 2002.

(e) An ore crushing and handling operation, ore dryer, indurating furnace, or finished pellet handling operation at your taconite iron ore processing plant is new if you commence construction or reconstruction of the affected source on or after December 18, 2002. An affected source is reconstructed if it meets the definition of reconstruction in § 63.2.

§ 63.9583 When do I have to comply with this subpart?

(a) If you have an existing affected source, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than October 30, 2006.

(b) If you have a new affected source and its initial startup date is on or before October 30, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by October 30, 2003.

(c) If you have a new affected source and its initial startup date is after October 30, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup.

(d) If your taconite iron ore processing plant is an area source that becomes a major source of HAP, the compliance dates in paragraphs (d)(1) and (2) of this section apply to you.

(1) Any portion of the taconite iron ore processing plant that is a new affected source or a new reconstructed source must be in compliance with this subpart upon startup.

(2) All other parts of the taconite iron ore processing plant must be in compliance with this subpart no later than 3 years after the plant becomes a major source.

(e) You must meet the notification and schedule requirements in § 63.9640. Several of these notifications must be submitted before the compliance date for your affected source.

Emission Limitations and Work Practice Standards

§ 63.9590 What emission limitations must I meet?

(a) You must meet each emission limit in Table 1 to this subpart that applies to you.

(b) You must meet each operating limit for control devices in paragraphs (b)(1) through (5) of this section that applies to you.

(1) Except as provided in paragraph (b)(2) of this section, for each wet scrubber applied to meet any particulate matter emission limit in Table 1 to this subpart, you must maintain the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial performance test.

(2) For each dynamic wet scrubber applied to meet any particulate matter emission limit in Table 1 to this subpart, you must maintain the daily average scrubber water flow rate and either the daily average fan amperage (a surrogate for fan speed as revolutions per minute) or the daily average pressure drop at or above the minimum levels established during the initial performance test.

(3) For each dry electrostatic precipitator applied to meet any particulate matter emission limit in Table 1 to this subpart, you must meet the operating limits in paragraph (b)(3)(i) or (ii) of this section.

(i) Maintain the 6-minute average opacity of emissions exiting the control device stack at or below the level established during the initial performance test.

(ii) Maintain the daily average secondary voltage and daily average secondary current for each field at or above the minimum levels established during the initial performance test.

(4) For each wet electrostatic precipitator applied to meet any particulate matter emission limit in Table 1 to this subpart, you must meet the operating limits in paragraphs (b)(4)(i) through (iii) of this section.

(i) Maintain the daily average secondary voltage for each field at or above the minimum levels established during the initial performance test.

(ii) Maintain the daily average stack outlet temperature at or below the maximum levels established during the initial performance test.

(iii) Maintain the daily average water flow rate at or above the minimum levels established during the initial performance test.

(5) If you use any air pollution control device other than a baghouse, wet scrubber, dynamic scrubber, dry electrostatic precipitator, or wet electrostatic precipitator, you must submit a site-specific monitoring plan in accordance with § 63.9631(f).

(c) You may petition the Administrator for approval of alternatives to the monitoring requirements in paragraphs (b)(1) through (4) of this section as allowed under § 63.8(f) and as defined in § 63.90.

§ 63.9591 What work practice standards must I meet?

(a) You must prepare, and at all times operate according to, a fugitive dust emissions control plan that describes in detail the measures that will be put in place to control fugitive dust emissions from the locations listed in paragraphs (a)(1) through (6) of this section.

(1) Stockpiles (includes, but is not limited to, stockpiles of uncrushed ore, crushed ore, or finished pellets);

(2) Material transfer points;

(3) Plant roadways;

(4) Tailings basin;

(5) Pellet loading areas; and

(6) Yard areas.

(b) A copy of your fugitive dust emissions control plan must be submitted for approval to the Administrator on or before the applicable compliance date for the affected source as specified in § 63.9583. The requirement for the plant to operate according to the fugitive dust emissions control plan must be incorporated by reference in the operating permit for the plant that is issued by the designated permitting authority under 40 CFR part 70 or 40 CFR part 71.

(c) You can use an existing fugitive dust emissions control plan provided it meets the requirements in paragraphs (c)(1) through (3) of this section.

(1) The plan satisfies the requirements of paragraph (a) of this section.

(2) The plan describes the current measures to control fugitive dust emission sources.

(3) The plan has been approved as part of a State implementation plan or title V permit.

(d) You must maintain a current copy of the fugitive dust emissions control plan onsite, and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

Operation and Maintenance Requirements

§ 63.9600 What are my operation and maintenance requirements?

(a) As required by § 63.6(e)(1)(i), you must always operate and maintain your affected source, including air pollution control and monitoring equipment, in a manner consistent with good air pollution control practices for minimizing emissions at least to the levels required by this subpart.

(b) You must prepare, and at all times operate according to, a written operation and maintenance plan for each control device applied to meet any particulate matter emission limit in Table 1 to this subpart and to meet the requirement of each indurating furnace subject to good combustion practices (GCP). Each site-specific operation and maintenance plan must be submitted to the Administrator on or before the compliance date that is specified in § 63.9583 for your affected source. The plan you submit must explain why the chosen practices (*i.e.,* quantified objectives) are effective in performing corrective actions or GCP in minimizing the formation of formaldehyde (and other products of incomplete combustion). The Administrator will review the adequacy of the site-specific practices and objectives you will follow and the records you will keep to demonstrate compliance with your Plan. If the Administrator determines that any portion of your operation and maintenance plan is not adequate, we can reject those portions of the plan, and request that you provide additional information addressing the relevant issues. In the interim of this process, you will continue to follow your current site-specific practices and objectives, as submitted, until your revisions are accepted as adequate by the Administrator. You must maintain a current copy of the operation and maintenance plan onsite, and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart. Each operation and maintenance plan must address the elements in paragraphs (b)(1) through (4) of this section.

(1) Preventative maintenance for each control device, including a preventative maintenance schedule that is consistent with the manufacturer's instructions for routine and long-term maintenance.

(2) Corrective action procedures for bag leak detection systems. In the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. Corrective actions may include, but are not limited to, the actions listed in paragraphs (b)(2)(i) through (vi) of this section.

(i) Inspecting the baghouse for air leaks, torn or broken bags or filter media, or any other condition that may cause an increase in emissions.

(ii) Sealing off defective bags or filter media.

(iii) Replacing defective bags or filter media or otherwise repairing the control device.

(iv) Sealing off a defective baghouse compartment.

(v) Cleaning the bag leak detection system probe, or otherwise repairing the bag leak detection system.

(vi) Adjusting the process operation producing the particulate emissions.

(3) Corrective action procedures for continuous parameter monitoring systems (CPMS) for all air pollution control devices except for baghouses. In the event you exceed an established operating limit for an air pollution control device except for a baghouse, you must initiate corrective action to determine the cause of the operating limit exceedance and complete the corrective action within 10 calendar days. The corrective action procedures you take must be consistent with the installation, operation, and maintenance procedures listed in your site-specific CPMS monitoring plan in accordance with § 63.9632(b).

(4) Good combustion practices for indurating furnaces. You must identify and implement a set of site-specific GCP for each type of indurating furnace at your plant. These GCP should correspond to your standard operating procedures for maintaining the proper

and efficient combustion within each indurating furnace. Good combustion practices include, but are not limited to, the elements listed in paragraphs (b)(4)(i) through (v) of this section.

(i) Proper operating conditions for each indurating furnace (*e.g.,* minimum combustion temperature, maximum carbon monoxide concentration in the furnace exhaust gases, burner alignment, or proper fuel-air distribution/mixing).

(ii) Routine inspection and preventative maintenance and corresponding schedules of each indurating furnace.

(iii) Performance analyses of each indurating furnace.

(iv) Keeping applicable operator logs.

(v) Keeping applicable records to document compliance with each element.

General Compliance Requirements

§ 63.9610 What are my general requirements for complying with this subpart?

(a) You must be in compliance with the requirements in paragraphs (a)(1) through (6) in this section at all times, except during periods of startup, shutdown, and malfunction. The terms startup, shutdown, and malfunction are defined in § 63.2.

(1) The emission limitations in § 63.9590.

(2) The work practice standards in § 63.9591.

(3) The operation and maintenance requirements in § 63.9600.

(4) The notification requirements in § 63.9640.

(5) The reporting requirements in § 63.9641.

(6) The recordkeeping requirements in § 63.9642.

(b) During the period between the compliance date specified for your affected source in § 63.9583 and the date upon which continuous monitoring systems have been installed and certified and any applicable operating limits have been set, you must maintain a log detailing the operation and maintenance of the process and emissions control equipment. This includes the daily monitoring and recordkeeping of air pollution control device operating parameters as specified in § 63.9590(b).

(c) You must develop and implement a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3).

Initial Compliance Requirements

§ 63.9620 On which units and by what date must I conduct performance tests or other initial compliance demonstrations?

(a) For each ore crushing and handling affected source, you must demonstrate initial compliance with the emission limits in Table 1 to this subpart by conducting an initial performance test for particulate matter as specified in paragraphs (a)(1) and (2) of this section.

(1) Except as provided in paragraph (e) of this section, an initial performance test must be performed on all stacks associated with ore crushing and handling.

(2) Initial performance tests must be completed no later than 180 calendar days after the compliance date specified in § 63.9583. Performance tests conducted between October 30, 2003 and no later than 180 days after the corresponding compliance date can be used for initial compliance demonstration, provided the tests meet the initial performance testing requirements of this subpart.

(b) For each indurating furnace affected source, you must demonstrate initial compliance with the emission limits in Table 1 to this subpart by conducting an initial performance test for particulate matter as specified in paragraphs (b)(1) and (2) of this section.

(1) An initial performance test must be performed on all stacks associated with each indurating furnace.

(2) Initial performance tests must be completed no later than 180 calendar days after the compliance date specified in § 63.9583. Performance tests conducted between October 30, 2003 and no later than 180 days after the corresponding compliance date can be used for initial compliance demonstration, provided the tests meet the initial performance testing requirements of this subpart. For indurating furnaces with multiple stacks, the performance tests for all stacks must be completed within a reasonable period of time, such that the indurating furnace operating characteristics remain representative for the duration of the stack tests.

(c) For each finished pellet handling affected source, you must demonstrate initial compliance with the emission limits in Table 1 to this subpart by conducting an initial performance test for particulate matter as specified in paragraphs (c)(1) and (2) of this section.

(1) Except as provided in paragraph (e) of this section, an initial performance test must be performed on all stacks associated with finished pellet handling.

(2) Initial performance tests must be completed no later than 180 calendar days after the compliance date specified in § 63.9583. Performance tests conducted between October 30, 2003 and no later than 180 days after the corresponding compliance date can be used for initial compliance demonstration, provided the tests meet the initial compliance testing requirements of this subpart.

(d) For each ore dryer affected source, you must demonstrate initial compliance with the emission limits in Table 1 to this subpart by conducting an initial performance test for particulate matter as specified in paragraphs (d)(1) and (2) of this section.

(1) An initial performance test must be performed on all stacks associated with each ore dryer.

(2) Initial performance tests must be completed no later than 180 calendar days after the compliance date specified in § 63.9583. Performance tests conducted between October 30, 2003 and no later than 180 days after the corresponding compliance date can be used for initial compliance demonstration, provided the tests meet the initial compliance testing requirements of this subpart. For ore dryers with multiple stacks, the performance tests for all stacks must be completed within a reasonable period of time, such that the ore dryer operating characteristics remain representative for the duration of the stack tests.

(e) For ore crushing and handling affected sources and finished pellet handling affected sources, in lieu of conducting initial performance tests for particulate matter on all stacks, you may elect to group a maximum of six similar emission units together and conduct an initial compliance test on one representative emission unit within each group of similar emission units. The determination of whether emission units are similar must meet the criteria in paragraph (f) of this section. If you decide to test representative emission units, you must prepare and submit a testing plan as described in paragraph (g) of this section.

(f) If you elect to test representative emission units as provided in paragraph (e) of this section, the units that are grouped together as similar units must meet the criteria in paragraphs (f)(1) through (3) of this section.

(1) All emission units within a group must be of the same process type (*e.g.,* primary crushers, secondary crushers, tertiary crushers, fine crushers, ore conveyors, ore bins, ore screens, grate feed, pellet loadout, hearth layer, cooling stacks, pellet conveyor, and pellet screens). You cannot group

emission units from different process types together for the purposes of this section.

(2) All emission units within a group must also have the same type of air pollution control device (*e.g.,* wet scrubbers, dynamic wet scrubbers, rotoclones, multiclones, wet and dry electrostatic precipitators, and baghouses). You cannot group emission units with different air pollution control device types together for the purposes of this section.

(3) The site-specific operating limits established for the emission unit selected as representative of a group of similar emission units will be used as the operating limit for each emission unit within the group. The operating limit established for the representative unit must be met by each emission unit within the group.

(g) If you plan to conduct initial performance tests on representative emission units within an ore crushing and handling affected source or a finished pellet handling affected source, you must submit a testing plan for initial performance tests. This testing plan must be submitted to the Administrator or delegated authority no later than 90 days prior to the first scheduled initial performance test. The testing plan must contain the information specified in paragraphs (g)(1) through (3) of this section.

(1) A list of all emission units. This list must clearly identify all emission units that have been grouped together as similar emission units. Within each group of emission units, you must identify the emission unit that will be the representative unit for that group and subject to initial performance testing.

(2) A list of the process type and type of air pollution control device on each emission unit.

(3) A schedule indicating when you will conduct an initial performance test for particulate matter for each representative emission unit.

(h) For each work practice standard and operation and maintenance requirement that applies to you where initial compliance is not demonstrated using a performance test, you must demonstrate initial compliance within 30 calendar days after the compliance date that is specified for your affected source in § 63.9583.

(i) If you commenced construction or reconstruction of an affected source between December 18, 2002 and October 30, 2003 , you must demonstrate initial compliance with either the proposed emission limit or the promulgated emission limit no later than 180 calendar days after October 30, 2003 or no later than 180 calendar days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(j) If you commenced construction or reconstruction of an affected source between December 18, 2002 and October 30, 2003, and you chose to comply with the proposed emission limit when demonstrating initial compliance, you must conduct a second performance test to demonstrate compliance with the promulgated emission limit by 3 years and 180 calendar days after October 30, 2003, or after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

§ 63.9621 What test methods and other procedures must I use to demonstrate initial compliance with the emission limits for particulate matter?

(a) You must conduct each performance test that applies to your affected source according to the requirements in § 63.7(e)(1) and paragraphs (b) and (c) of this section.

(b) For each ore crushing and handling affected source and each finished pellet handling affected source, you must determine compliance with the applicable emission limit for particulate matter in Table 1 to this subpart by following the test methods and procedures in paragraphs (b)(1) through (3) of this section.

(1) Except as provided in § 63.9620(e), determine the concentration of particulate matter in the stack gas for each emission unit according to the test methods in appendix A to part 60 of this chapter. The applicable test methods are listed in paragraphs (b)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G, as applicable, to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5D, or 17 to determine the concentration of particulate matter.

(2) Each Method 5, 5D, or 17 performance test must consist of three separate runs. Each run must be conducted for a minimum of 2 hours. The average particulate matter concentration from the three runs will be used to determine compliance, as shown in Equation 1 of this section.

$$C_i = \frac{C_1 + C_2 + C_3}{3} \qquad \text{(Eq. 1)}$$

Where:

C_i = Average particulate matter concentration for emission unit, grains per dry standard cubic foot, (gr/dscf);

C_1 = Particulate matter concentration for run 1 corresponding to emission unit, gr/dscf;

C_2 = Particulate matter concentration for run 2 corresponding to emission unit, gr/dscf; and

C_3 = Particulate matter concentration for run 3 corresponding to emission unit, gr/dscf.

(3) For each ore crushing and handling affected source and each finished pellet handling affected source, you must determine the flow-weighted mean concentration of particulate matter emissions from all emission units in each affected source following the procedure in paragraph (b)(3)(i) or (ii) of this section.

(i) If an initial performance test is conducted on all emission units within an affected source, calculate the flow-weighted mean concentration of particulate matter emissions from the affected source using Equation 2 of this section.

$$C_a = \frac{\sum_{i=1}^{n} (C_i * Q_i)}{\sum_{i=1}^{n} Q_i} \qquad \text{(Eq. 2)}$$

Where:

C_a = Flow-weighted mean concentration of particulate matter for all emission units within affected source, (gr/dscf);

C_i = Average particulate matter concentration measured during the performance test from emission unit "i" in affected source, as determined using Equation 1 of this section, gr/dscf;

Q_i = Average volumetric flow rate of stack gas measured during the performance test from emission unit "i" in affected source, dscf/hr; and

n = Number of emission units in affected source.

(ii) If you are grouping similar emission units together in accordance with § 63.9620(e), you must follow the procedures in paragraphs (b)(3)(ii)(A) through (C) of this section.

(A) Assign the average particulate matter concentration measured from the representative unit, as determined from Equation 1 of this section, to each emission unit within the corresponding group of similar units.

(B) Establish the maximum operating volumetric flow rate of exhaust gas from each emission unit within each group of similar units.

(C) Using the data from paragraphs (b)(3)(ii)(A) and (B) of this section, calculate the flow-weighted mean concentration of particulate matter emissions from the affected source using Equation 3 of this section.

$$C_a = \frac{\sum_{k=1}^{m}\left(C_k * Q_k\right)}{\sum_{k=1}^{m} Q_k} \qquad \text{(Eq. 3)}$$

Where:

C_a = Flow-weighted mean concentration of particulate matter for all emission units within affected source, gr/dscf;

C_k = Average particulate matter concentration measured during the performance test from the representative emission unit in group ''k'' of affected source ''a,'' as determined using Equation 1 of this section, gr/dscf;

Q_k = Sum of the maximum operating volumetric flow rates of stack gas from all similar emission units within group ''k'' of affected source, dscf/hr; and

m = Number of similar emission unit groups in affected source.

(c) For each ore dryer affected source and each indurating furnace affected source, you must determine compliance with the applicable emission limit for particulate matter in Table 1 to this subpart by following the test methods and procedures in paragraphs (c)(1) through (3) of this section.

(1) Determine the concentration of particulate matter for each stack according to the test methods in 40 CFR part 60, appendix A. The applicable test methods are listed in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A to select sampling port locations and the number of traverse points. Sampling ports must be located at the outlet of the control device and prior to any releases to the atmosphere.

(ii) Method 2, 2A, 2C, 2D, 2F, or 2G, as applicable, to determine the volumetric flow rate of the stack gas.

(iii) Method 3, 3A, or 3B to determine the dry molecular weight of the stack gas.

(iv) Method 4 to determine the moisture content of the stack gas.

(v) Method 5, 5D, or 17 to determine the concentration of particulate matter.

(2) Each Method 5, 5D, or 17 performance test must consist of three separate runs. Each run must be conducted for a minimum of 2 hours. The average particulate matter concentration from the three runs will be used to determine compliance, as shown in Equation 1 of this section.

(3) For each ore dryer and each indurating furnace with multiple stacks, calculate the flow-weighted mean concentration of particulate matter emissions using Equation 4 of this section.

$$C_b = \frac{\sum_{j=1}^{n}\left(C_j * Q_j\right)}{\sum_{j=1}^{n} Q_j} \qquad \text{(Eq. 4)}$$

Where:

C_b = Flow-weighted mean concentration of particulate matter for all stacks associated with affected source, gr/dscf;

C_j = Average particulate matter concentration measured during the performance test from stack ''j'' in affected source, as determined using Equation 1 of this section, gr/dscf;

Q_j = Average volumetric flow rate of stack gas measured during the performance test from stack ''j'' in affected source, dscf/hr;

n = Number of stacks associated with affected source.

§ 63.9622 What test methods and other procedures must I use to establish and demonstrate initial compliance with the operating limits?

(a) For wet scrubbers subject to performance testing in § 63.9620 and operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(1), you must establish site-specific operating limits according to the procedures in paragraphs (a)(1) through (3) of this section.

(1) Using the CPMS required in § 63.9631(b), measure and record the pressure drop and scrubber water flow rate every 15 minutes during each run of the particulate matter performance test.

(2) Calculate and record the average pressure drop and scrubber water flow rate for each individual test run. Your operating limits are established as the lowest average pressure drop and the lowest average scrubber water flow rate corresponding to any of the three test runs.

(3) If a rod-deck venturi scrubber is applied to an indurating furnace to meet any particulate matter emission limit in Table 1 to this subpart, you may establish a lower average pressure drop operating limit by using historical average pressure drop data from a certified performance test completed on or after December 18, 2002 instead of using the average pressure drop value determined during the initial performance test, as specified in paragraph (a)(2) of this section. If historical average pressure drop data are used to establish an operating limit (*i.e.*, using data from a certified performance test conducted prior to the promulgation date of the final rule), then the average particulate matter concentration corresponding to the historical performance test must be at or below the applicable indurating furnace emission limit, as listed in Table 1 to this subpart.

(b) For dynamic wet scrubbers subject to performance testing in § 63.9620 and operating limits for scrubber water flow rate and either fan amperage or pressure drop in § 63.9590(b)(2), you must establish site-specific operating limits according to the procedures in paragraphs (b)(1) and (2) of this section.

(1) Using the CPMS required in § 63.9631(b), measure and record the scrubber water flow rate and either the fan amperage or pressure drop every 15 minutes during each run of the particulate matter performance test.

(2) Calculate and record the average scrubber water flow rate and either the average fan amperage or average pressure drop for each individual test run. Your operating limits are established as the lowest average scrubber water flow rate and either the lowest average fan amperage or pressure drop value corresponding to any of the three test runs.

(c) For a dry electrostatic precipitator subject to performance testing in § 63.9620 and operating limits in § 63.9590(b)(3), you must establish a site-specific operating limit according to the procedures in paragraphs (c)(1) or (2) of this section.

(1) If the operating limit for your dry electrostatic precipitator is a 6-minute average opacity of emissions value, then you must follow the requirements in paragraphs (c)(1)(i) through (iii) of this section.

(i) Using the continuous opacity monitoring system (COMS) required in § 63.9631(d)(1), measure and record the opacity of emissions from each control device stack during the particulate matter performance test.

(ii) Compute and record the 6-minute opacity averages from 24 or more data points equally spaced over each 6-minute period (*e.g.*, at 15-second intervals) during the test runs.

(iii) Using the opacity measurements from a performance test that meets the emission limit, determine the opacity value corresponding to the 99 percent upper confidence level of a normal distribution of the 6-minute opacity averages.

(2) If the operating limit for your dry electrostatic precipitator is the daily average secondary voltage and daily average secondary current for each field, then you must follow the requirements in paragraphs (c)(2)(i) and (ii) of this section.

(i) Using the CPMS required in § 63.9631(d)(2), measure and record the secondary voltage and secondary current for each dry electrostatic precipitator field every 15 minutes during each run of the particulate matter performance test.

(ii) Calculate and record the average secondary voltage and secondary current for each dry electrostatic precipitator field for each individual test run. Your operating limits are established as the lowest average secondary voltage and secondary current value for each dry electrostatic precipitator field corresponding to any of the three test runs.

(d) For a wet electrostatic precipitator subject to performance testing in § 63.9620 and operating limit in § 63.9590(b)(4), you must establish a site-specific operating limit according to the procedures in paragraphs (d)(1) and (2) of this section.

(1) Using the CPMS required in § 63.9631(e), measure and record the parametric values in paragraphs (d)(1)(i) through (iii) of this section for each wet electrostatic precipitator field every 15 minutes during each run of the particulate matter performance test.

(i) Secondary voltage;

(ii) Water flow rate; and

(iii) Stack outlet temperature.

(2) For each individual test run, calculate and record the average value for each operating parameter in paragraphs (d)(1)(i) through (iii) of this section for each wet electrostatic precipitator field. Your operating limits are established as the lowest average value for each operating parameter corresponding to any of the three test runs.

(e) If you use an air pollution control device other than a wet scrubber, dynamic wet scrubber, dry electrostatic precipitator, wet electrostatic precipitator, or baghouse, and it is subject to performance testing in § 63.9620, you must submit a site-specific monitoring plan in accordance with § 63.9631(f). The site-specific monitoring plan must include the site-specific procedures for demonstrating initial and continuous compliance with the corresponding operating limits.

(f) You may change the operating limits for any air pollution control device as long as you meet the requirements in paragraphs (f)(1) through (3) of this section.

(1) Submit a written notification to the Administrator of your request to conduct a new performance test to revise the operating limit.

(2) Conduct a performance test to demonstrate compliance with the applicable emission limitation in Table 1 to this subpart.

(3) Establish revised operating limits according to the applicable procedures in paragraphs (a) through (e) of this section.

§ 63.9623 How do I demonstrate initial compliance with the emission limitations that apply to me?

(a) For each affected source subject to an emission limit in Table 1 to this subpart, you must demonstrate initial compliance by meeting the emission limit requirements in paragraphs (a)(1) through (4) of this section.

(1) For ore crushing and handling, the flow-weighted mean concentration of particulate matter, determined according to the procedures in §§ 63.9620(a) and 63.9621(b), must not exceed the emission limits in Table 1 to this subpart.

(2) For indurating furnaces, the flow-weighted mean concentration of particulate matter, determined according to the procedures in §§ 63.9620(b) and 63.9621(c), must not exceed the emission limits in Table 1 to this subpart.

(3) For finished pellet handling, the flow-weighted mean concentration of particulate matter, determined according to the procedures in §§ 63.9620(c) and 63.9621(b), must not exceed the emission limits in Table 1 to this subpart.

(4) For ore dryers, the flow-weighted mean concentration of particulate matter, determined according to the procedures in §§ 63.9620(d) and 63.9621(c), must not exceed the emission limits in Table 1 to this subpart.

(b) For each affected source subject to an emission limit in Table 1 to this subpart, you must demonstrate initial compliance by meeting the operating limit requirements in paragraphs (b)(1) through (5) of this section.

(1) For each wet scrubber subject to performance testing in § 63.9620 and operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(1), you have established appropriate site-specific operating limits and have a record of the pressure drop and scrubber water flow rate measured during the performance test in accordance with § 63.9622(a).

(2) For each dynamic wet scrubber subject to performance testing in § 63.9620 and operating limits for scrubber water flow rate and either fan amperage or pressure drop in § 63.9590(b)(2), you have established appropriate site-specific operating limits and have a record of the scrubber water flow rate and either the fan amperage or pressure drop value, measured during the performance test in accordance with § 63.9622(b).

(3) For each dry electrostatic precipitator subject to performance testing in § 63.9620 and one of the operating limits in § 63.9590(b)(3), you must meet the requirements in paragraph (b)(3)(i) or (ii) of this section.

(i) If you are subject to the operating limit for opacity in § 63.9590(b)(3)(i), you have established appropriate site-specific operating limits and have a record of the opacity measured during the performance test in accordance with § 63.9622(c)(1).

(ii) If you are subject to the operating limit for secondary voltage and secondary current in § 63.9590(b)(3)(ii), you have established appropriate site-specific operating limits and have a record of the secondary voltage and secondary current measured during the performance test in accordance with § 63.9622(c)(2).

(4) For each wet electrostatic precipitator subject to performance testing in § 63.9620 and operating limits for secondary voltage, water flow rate, and stack outlet temperature in § 63.9590(b)(4), you have established appropriate site-specific operating limits and have a record of the secondary voltage, water flow rate, and stack outlet temperature measured during the performance test in accordance with § 63.9622(d).

(5) For other air pollution control devices subject to performance testing in § 63.9620 and operating limits in accordance with § 63.9590(b)(5), you have submitted a site-specific monitoring plan in accordance with § 63.9631(f) and have a record of the site-specific operating limits as measured during the performance test in accordance with § 63.9622(e).

(c) For each emission limitation and operating limit that applies to you, you must submit a notification of compliance status according to § 63.9640(e).

§ 63.9624 How do I demonstrate initial compliance with the work practice standards that apply to me?

You must demonstrate initial compliance with the work practice standards by meeting the requirements in paragraphs (a) through (c) of this section.

(a) You must prepare a fugitive dust emissions control plan in accordance with the requirements in § 63.9591.

(b) You must submit to the Administrator the fugitive dust emissions control plan in accordance with the requirements in § 63.9591.

(c) You must implement each control practice according to the procedures specified in your fugitive dust emissions control plan.

§ 63.9625 How do I demonstrate initial compliance with the operation and maintenance requirements that apply to me?

For each air pollution control device subject to operating limits in § 63.9590(b), you have demonstrated initial compliance if you meet all of the requirements in paragraphs (a) through (d) of this section.

(a) You have prepared the operation and maintenance plan for air pollution control devices in accordance with § 63.9600(b).

(b) You have operated each air pollution control device according to the procedures in the operation and maintenance plan.

(c) You have submitted a notification of compliance status according to the requirements in § 63.9640(e).

(d) You have prepared a site-specific monitoring plan in accordance with § 63.9632(b).

Continuous Compliance Requirements

§ 63.9630 When must I conduct subsequent performance tests?

(a) You must conduct subsequent performance tests to demonstrate continued compliance with the ore crushing and handling emission limits in Table 1 to this subpart according to the schedule developed by your permitting authority and shown in your title V permit. If a title V permit has not been issued, you must submit a testing plan and schedule, containing the information specified in paragraph (e) of this section, to the permitting authority for approval.

(b) You must conduct subsequent performance tests on all stacks associated with indurating furnaces to demonstrate continued compliance with the indurating furnace emission limits in Table 1 to this subpart according to the schedule developed by your permitting authority and shown in your title V permit, but no less frequent than twice per 5-year permit term. If a title V permit has not been issued, you must submit a testing plan and schedule, containing the information specified in paragraph (e) of this section, to the permitting authority for approval. For indurating furnaces with multiple stacks, the performance tests for all stacks associated with that indurating furnace must be conducted within a reasonable period of time, such that the indurating furnace operating characteristics remain representative for the duration of the stack tests.

(c) You must conduct subsequent performance tests to demonstrate continued compliance with the finished pellet handling emission limits in Table 1 to this subpart according to the schedule developed by your permitting authority and shown in your title V permit. If a title V permit has not been issued, you must submit a testing plan and schedule, containing the information specified in paragraph (e) of this section, to the permitting authority for approval.

(d) You must conduct subsequent performance tests on all stacks associated with ore dryers to demonstrate continued compliance with the ore dryer emission limits in Table 1 to this subpart according to the schedule developed by your permitting authority and shown in your title V permit. If a title V permit has not been issued, you must submit a testing plan and schedule, containing the information specified in paragraph (e) of this section, to the permitting authority for approval. For ore dryers with multiple stacks, the performance tests for all stacks associated with an ore dryer must be conducted within a reasonable period of time, such that the ore dryer operating characteristics remain representative for the duration of the stack tests.

(e) If your plant does not have a title V permit, you must submit a testing plan for subsequent performance tests as required in paragraphs (a) through (d) of this section. This testing plan must be submitted to the Administrator on or before the compliance date that is specified in § 63.9583. The testing plan must contain the information specified in paragraphs (e)(1) and (2) of this section. You must maintain a current copy of the testing plan onsite, and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

(1) A list of all emission units.

(2) A schedule indicating when you will conduct subsequent performance tests for particulate matter for each of the emission units.

§ 63.9631 What are my monitoring requirements?

(a) For each baghouse applied to meet any particulate matter emission limit in Table 1 to this subpart, you must install, operate, and maintain a bag leak detection system to monitor the relative change in particulate matter loadings according to the requirements in § 63.9632(a), and conduct inspections at their specified frequencies according to the requirements in paragraphs (a)(1) through (8) of this section.

(1) Monitor the pressure drop across each baghouse cell each day to ensure pressure drop is within the normal operating range.

(2) Confirm that dust is being removed from hoppers through weekly visual inspections or other means of ensuring the proper functioning of removal mechanisms.

(3) Check the compressed air supply of pulse-jet baghouses each day.

(4) Monitor cleaning cycles to ensure proper operation using an appropriate methodology.

(5) Check bag cleaning mechanisms for proper functioning through monthly visual inspections or equivalent means.

(6) Make monthly visual checks of bag tension on reverse air and shaker-type baghouses to ensure that bags are not kinked (kneed or bent) or lying on their sides. You do not have to make this check for shaker-type baghouses that have self-tensioning (spring-loaded) devices.

(7) Confirm the physical integrity of the baghouse through quarterly visual inspections of the baghouse interior for air leaks.

(8) Inspect fans for wear, material buildup, and corrosion through quarterly visual inspections, vibration detectors, or equivalent means.

(b) Except as provided in paragraph (c) of this section, for each wet scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(1), you must install, operate, and maintain a CPMS according to the requirements in § 63.9632(b) through (e) and monitor the daily average pressure drop and daily average scrubber water flow rate according to the requirements in § 63.9633.

(c) For each dynamic wet scrubber subject to the scrubber water flow rate and either the fan amperage or pressure drop operating limits in § 63.9590(b)(2), you must install, operate, and maintain a CPMS according to the requirements in § 63.9632(b) through (e) and monitor the daily average scrubber water flow rate and either the daily average fan amperage or the daily average pressure drop according to the requirements in § 63.9633.

(d) For each dry electrostatic precipitator subject to the operating limits in § 63.9590(b)(3), you must follow the monitoring requirements in paragraph (d)(1) or (2) of this section.

(1) If the operating limit you choose to monitor is the 6-minute average opacity of emissions in accordance with § 63.9590(b)(3)(i), you must install, operate, and maintain a COMS according to the requirements in § 63.9632(f) and monitor the 6-minute average opacity of emissions exiting each control device stack according to the requirements in § 63.9633.

(2) If the operating limit you choose to monitor is average secondary voltage and average secondary current for each dry electrostatic precipitator field in accordance with § 63.9590(b)(3)(ii), you must install, operate, and maintain a CPMS according to the requirements in § 63.9632(b) through (e) and monitor the daily average secondary voltage and daily average secondary current according to the requirements in § 63.9633.

(e) For each wet electrostatic precipitator subject to the operating limits in § 63.9590(b)(4), you must install, operate, and maintain a CPMS according to the requirements in § 63.9632(b) through (e) and monitor the daily average secondary voltage, daily average stack outlet temperature, and daily average water flow rate according to the requirements in § 63.9633.

(f) If you use any air pollution control device other than a baghouse, wet scrubber, dry electrostatic precipitator, or wet electrostatic precipitator, you must submit a site-specific monitoring plan that includes the information in paragraphs (f)(1) through (4) of this section. The monitoring plan is subject to approval by the Administrator. You must maintain a current copy of the monitoring plan onsite, and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

(1) A description of the device.

(2) Test results collected in accordance with § 63.9621 verifying the performance of the device for reducing emissions of particulate matter to the atmosphere to the levels required by this subpart.

(3) A copy of the operation and maintenance plan required in § 63.9600(b).

(4) Appropriate operating parameters that will be monitored to maintain continuous compliance with the applicable emission limitation(s).

§ 63.9632 What are the installation, operation, and maintenance requirements for my monitoring equipment?

(a) For each negative pressure baghouse or positive pressure baghouse equipped with a stack, applied to meet any particulate emission limit in Table 1 to this subpart, you must install, operate, and maintain a bag leak detection system according to the requirements in paragraphs (a)(1) through (8) of this section.

(1) The system must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 10 milligrams per actual cubic meter (0.0044 grains per actual cubic foot) or less.

(2) The system must provide output of relative changes in particulate matter loadings.

(3) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm level set point established according to paragraph (a)(4) of this section. The alarm must be located such that it can be heard by the appropriate plant personnel.

(4) For each bag leak detection system, you must develop and submit to the Administrator for approval, a site-specific monitoring plan that addresses the items identified in paragraphs (a)(4)(i) through (v) of this section. For each bag leak detection system that operates based on the triboelectric effect, the monitoring plan shall be consistent with the recommendations contained in the U.S. Environmental Protection Agency (U.S. EPA) guidance document, ''Fabric Filter Bag Leak Detection Guidance'' (EPA–454/R–98–015). This document is available on the EPA's Technology Transfer Network at *http://www.epa.gov/ttn/emc/cem/tribo.pdf* (Adobe Acrobat version) or *http://www.epa.gov/ttn/emc/cem/tribo.wpd* (WordPerfect version). You must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe all of the items in paragraphs (a)(4)(i) through (v) of this section.

(i) Installation of the bag leak detection system.

(ii) Initial and periodic adjustment of the bag leak detection system including how the alarm set-point will be established.

(iii) Operation of the bag leak detection system including quality assurance procedures.

(iv) How the bag leak detection system will be maintained including a routine maintenance schedule and spare parts inventory list.

(v) How the bag leak detection system output shall be recorded and stored.

(5) To make the initial adjustment of the system, establish the baseline output by adjusting the sensitivity (range) and the averaging period of the device. Then, establish the alarm set points and the alarm delay time (if applicable).

(6) Following initial adjustment, do not adjust averaging period, alarm set point, or alarm delay time, without approval from the Administrator except as provided for in paragraph (a)(6)(i) of this section.

(i) Once per quarter, you may adjust the sensitivity of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required under paragraph (a)(4) of this section.

(ii) [Reserved]

(7) Where multiple detectors are required, the system's instrumentation and alarm may be shared among detectors.

(8) The bag leak detector sensor must be installed downstream of the baghouse and upstream of any wet scrubber.

(b) For each CPMS required in § 63.9631, you must develop and make available for inspection upon request by the permitting authority a site-specific monitoring plan that addresses the requirements in paragraphs (b)(1) through (7) of this section.

(1) Installation of the CPMS sampling probe or other interface at a measurement location relative to each affected emission unit such that the measurement is representative of control of the exhaust emissions (*e.g.,* on or downstream of the last control device).

(2) Performance and equipment specifications for the sample interface, the parametric signal analyzer, and the data collection and reduction system.

(3) Performance evaluation procedures and acceptance criteria (*e.g.,* calibrations).

(4) Ongoing operation and maintenance procedures in accordance with the general requirements of § 63.8(c)(1), (3), (4)(ii), (7), and (8).

(5) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d).

(6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c), (e)(1), and (e)(2)(i).

(7) Corrective action procedures that you will follow in the event an air pollution control device, except for a baghouse, exceeds an established operating limit as required in § 63.9600(b)(3).

(c) Unless otherwise specified, each CPMS must meet the requirements in paragraphs (c)(1) and (2) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 15-minute period and must have valid data for at least 95 percent of every daily averaging period.

(2) Each CPMS must determine and record the daily average of all recorded readings.

(d) You must conduct a performance evaluation of each CPMS in accordance with your site-specific monitoring plan.

(e) You must operate and maintain the CPMS in continuous operation according to the site-specific monitoring plan.

(f) For each dry electrostatic precipitator subject to the opacity operating limit in § 63.9590(b)(3)(i), you must install, operate, and maintain each COMS according to the requirements in paragraphs (f)(1) through (4) of this section.

(1) You must install each COMS and conduct a performance evaluation of each COMS according to § 63.8 and Performance Specification 1 in appendix B to 40 CFR part 60.

(2) You must develop and implement a quality control program for operating and maintaining each COMS according to § 63.8. At a minimum, the quality control program must include a daily calibration drift assessment, quarterly performance audit, and annual zero alignment of each COMS.

(3) You must operate and maintain each COMS according to § 63.8(e) and your quality control program. You must also identify periods the COMS is out of control, including any periods that the COMS fails to pass a daily calibration drift assessment, quarterly performance audit, or annual zero alignment audit.

(4) You must determine and record the 6-minute average opacity for periods during which the COMS is not out of control.

§ 63.9633 How do I monitor and collect data to demonstrate continuous compliance?

(a) Except for monitoring malfunctions, associated repairs, and required quality assurance or control activities (including as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times an affected source is operating.

(b) You may not use data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities in data averages and calculations used to report emission or operating levels, or to fulfill a minimum data availability requirement. You must use all the data collected during all other periods in assessing compliance.

(c) A monitoring malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide valid data. Monitoring failures that are caused in part by poor maintenance or careless operation are not considered malfunctions.

§ 63.9634 How do I demonstrate continuous compliance with the emission limitations that apply to me?

(a) For each affected source subject to an emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by meeting the requirements in paragraphs (b) through (f) of this section.

(b) For ore crushing and handling affected sources and finished pellet handling affected sources, you must demonstrate continuous compliance by meeting the requirements in paragraphs (b)(1) through (3) of this section.

(1) The flow-weighted mean concentration of particulate matter for all ore crushing and handling emission units and for all finished pellet handling emission units must be maintained at or below the emission limits in Table 1 to this subpart.

(2) You must conduct subsequent performance tests for emission units in the ore crushing and handling and finished pellet handling affected sources following the schedule in your title V permit. If a title V permit has not been issued, you must conduct subsequent performance tests according to a testing plan approved by the Administrator or delegated authority.

(3) For emission units not selected for initial performance testing and defined within a group of similar emission units in accordance with § 63.9620(e), you must calculate the daily average value of each operating parameter for the similar air pollution control device applied to each similar emission unit within a defined group using Equation 1 of this section.

$$P_k = \frac{\sum_{i=1}^{n} P_i}{n} \qquad \text{(Eq. 1)}$$

Where:

P_k = Daily average operating parameter value for all emission units within group ''k'';

P_i = Daily average parametric monitoring parameter value corresponding to emission unit ''i'' within group ''k''; and

n = Total number of emission units within group, including emission units that have been selected for performance tests and those that have not been selected for performance tests.

(c) For ore dryers and indurating furnaces, you must demonstrate continuous compliance by meeting the requirements in paragraphs (c)(1) and (2) of this section.

(1) The flow-weighted mean concentration of particulate matter for all stacks from the ore dryer or indurating furnace must be maintained at or below the emission limits in Table 1 to this subpart.

(2) For ore dryers, you must conduct subsequent performance tests following the schedule in your title V permit. For indurating furnaces, you must conduct subsequent performance tests following the schedule in your title V permit, but no less frequent than twice per 5-year permit term. If a title V permit has not been issued, you must conduct subsequent performance tests according to a testing plan approved by the Administrator or delegated authority.

(d) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (d)(1) and (2) of this section.

(1) Maintaining records of the time you initiated corrective action in the event of a bag leak detection system alarm, the corrective action(s) taken, and the date on which corrective action was completed.

(2) Inspecting and maintaining each baghouse according to the requirements in § 63.9631(a)(1) through (8) and recording all information needed to document conformance with these requirements. If you increase or decrease the sensitivity of the bag leak detection system beyond the limits specified in your site-specific monitoring plan, you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(e) Except as provided in paragraph (f) of this section, for each wet scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(1), you must demonstrate continuous compliance by completing the requirements of paragraphs (e)(1) through (4) of this section.

(1) Maintaining the daily average pressure drop and daily average scrubber water flow rate at or above the minimum levels established during the initial or subsequent performance test.

(2) Operating and maintaining each wet scrubber CPMS according to § 63.9632(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for pressure drop and scrubber water flow rate according to § 63.9632(c) and recording all information needed to document conformance with these requirements.

(4) If the daily average pressure drop or daily average scrubber water flow rate is below the operating limits established for a corresponding emission unit or group of similar emission units, you must then follow the corrective action

procedures in paragraph (j) of this section.

(f) For each dynamic wet scrubber subject to the operating limits for scrubber water flow rate and either the fan amperage or pressure drop in § 63.9590(b)(2), you must demonstrate continuous compliance by completing the requirements of paragraphs (f)(1) through (4) of this section.

(1) Maintaining the daily average scrubber water flow rate and either the daily average fan amperage or the daily average pressure drop at or above the minimum levels established during the initial or subsequent performance test.

(2) Operating and maintaining each dynamic wet scrubber CPMS according to § 63.9632(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for scrubber water flow rate and either fan amperage or pressure drop according to § 63.9632(c) and recording all information needed to document conformance with these requirements.

(4) If the daily average scrubber water flow rate, daily average fan amperage, or daily average pressure drop is below the operating limits established for a corresponding emission unit or group of similar emission units, you must then follow the corrective action procedures in paragraph (j) of this section.

(g) For each dry electrostatic precipitator subject to operating limits in § 63.9590(b)(3), you must demonstrate continuous compliance by completing the requirements of paragraph (g)(1) or (2) of this section.

(1) If the operating limit for your dry electrostatic precipitator is a 6-minute average opacity of emissions value, then you must follow the requirements in paragraphs (g)(1)(i) through (iii) of this section.

(i) Maintaining the 6-minute average opacity of emissions at or below the maximum level established during the initial or subsequent performance test.

(ii) Operating and maintaining each COMS and reducing the COMS data according to § 63.9632(f).

(iii) If the 6-minute average opacity of emissions is above the operating limits established for a corresponding emission unit, you must then follow the corrective action procedures in paragraph (j) of this section.

(2) If the operating limit for your dry electrostatic precipitator is the daily average secondary voltage and daily average secondary current for each field, then you must follow the requirements in paragraphs (g)(2)(i) through (iv) of this section.

(i) Maintaining the daily average secondary voltage or daily average secondary current for each field at or above the minimum levels established during the initial or subsequent performance test.

(ii) Operating and maintaining each dry electrostatic precipitator CPMS according to § 63.9632(b) and recording all information needed to document conformance with these requirements.

(iii) Collecting and reducing monitoring data for secondary voltage or secondary current for each field according to § 63.9632(c) and recording all information needed to document conformance with these requirements.

(iv) If the daily average secondary voltage or daily average secondary current for each field is below the operating limits established for a corresponding emission unit, you must then follow the corrective action procedures in paragraph (j) of this section.

(h) For each wet electrostatic precipitator subject to the operating limits for secondary voltage, stack outlet temperature, and water flow rate in § 63.9590(b)(4), you must demonstrate continuous compliance by completing the requirements of paragraphs (h)(1) through (4) of this section.

(1) Maintaining the daily average secondary voltage, daily average secondary current, and daily average scrubber water flow rate for each field at or above the minimum levels established during the initial or subsequent performance test. Maintaining the daily average stack outlet temperature at or below the maximum levels established during the initial or subsequent performance test.

(2) Operating and maintaining each wet electrostatic precipitator CPMS according to § 63.9632(b) and recording all information needed to document conformance with these requirements.

(3) Collecting and reducing monitoring data for secondary voltage, stack outlet temperature, and water flow rate according to § 63.9632(c) and recording all information needed to document conformance with these requirements.

(4) If the daily average secondary voltage, stack outlet temperature, or water flow rate does not meet the operating limits established for a corresponding emission unit, you must then follow the corrective action procedures in paragraph (j) of this section.

(i) If you use an air pollution control device other than a wet scrubber, dynamic wet scrubber, dry electrostatic precipitator, wet electrostatic precipitator, or baghouse, you must submit a site-specific monitoring plan in accordance with § 63.9631(f). The site-specific monitoring plan must include the site-specific procedures for demonstrating initial and continuous compliance with the corresponding operating limits.

(j) If the daily average operating parameter value for an emission unit or group of similar emission units does not meet the corresponding established operating limit, you must then follow the procedures in paragraphs (j)(1) through (4) of this section.

(1) You must initiate and complete initial corrective action within 10 calendar days and demonstrate that the initial corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After 10 calendar days, measure and record the daily average operating parameter value for the emission unit or group of similar emission units on which corrective action was taken. After the initial corrective action, if the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.

(2) If the initial corrective action required in paragraph (j)(1) of this section was not successful, then you must complete additional corrective action within 10 calendar days and demonstrate that the subsequent corrective action was successful. During any period of corrective action, you must continue to monitor and record all required operating parameters for equipment that remains in operation. After the second set of 10 calendar days allowed to implement corrective action, you must again measure and record the daily average operating parameter value for the emission unit or group of similar emission units. If the daily average operating parameter value for the emission unit or group of similar emission units meets the operating limit established for the corresponding unit or group, then the corrective action was successful and the emission unit or group of similar emission units is in compliance with the established operating limits.

(3) If the second attempt at corrective action required in paragraph (j)(2) of this section was not successful, then you must repeat the procedures of paragraph (j)(2) of this section until the corrective action is successful. If the

third attempt at corrective action is unsuccessful, you must conduct another performance test in accordance with the procedures in § 63.9622(f) and report to the Administrator as a deviation the third unsuccessful attempt at corrective action.

(4) After the third unsuccessful attempt at corrective action, you must submit to the Administrator the written report required in paragraph (j)(3) of this section within 5 calendar days after the third unsuccessful attempt at corrective action. This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.

§ 63.9635 How do I demonstrate continuous compliance with the work practice standards that apply to me?

(a) You must demonstrate continuous compliance with the work practice standard requirements in § 63.9591 by operating in accordance with your fugitive dust emissions control plan at all times.

(b) You must maintain a current copy of the fugitive dust emissions control plan required in § 63.9591 onsite and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

§ 63.9636 How do I demonstrate continuous compliance with the operation and maintenance requirements that apply to me?

(a) For each control device subject to an operating limit in § 63.9590(b), you must demonstrate continuous compliance with the operation and maintenance requirements in § 63.9600(b) by completing the requirements of paragraphs (a)(1) through (4) of this section.

(1) Performing preventative maintenance for each control device in accordance with § 63.9600(b)(1) and recording all information needed to document conformance with these requirements;

(2) Initiating and completing corrective action for a bag leak detection system alarm in accordance with § 63.9600(b)(2) and recording all information needed to document conformance with these requirements;

(3) Initiating and completing corrective action for a CPMS when you exceed an established operating limit for an air pollution control device except for a baghouse in accordance with § 63.9600(b)(3) and recording all information needed to document conformance with these requirements; and

(4) Implementing and maintaining site-specific good combustion practices for each indurating furnace in accordance with § 63.9600(b)(4) and recording all information needed to document conformance with these requirements.

(b) You must maintain a current copy of the operation and maintenance plan required in § 63.9600(b) onsite, and it must be available for inspection upon request. You must keep the plan for the life of the affected source or until the affected source is no longer subject to the requirements of this subpart.

§ 63.9637 What other requirements must I meet to demonstrate continuous compliance?

(a) *Deviations*. You must report each instance in which you did not meet each emission limitation in Table 1 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction in accordance with paragraph (b) of this section. You also must report each instance in which you did not meet the work practice standards in § 63.9591 and each instance in which you did not meet each operation and maintenance requirement in § 63.9600 that applies to you. These instances are deviations from the emission limitations, work practice standards, and operation and maintenance requirements in this subpart. These deviations must be reported in accordance with the requirements in § 63.9641.

(b) *Startups, shutdowns, and malfunctions*. During periods of startup, shutdown, and malfunction, you must operate in accordance with your startup, shutdown, and malfunction plan and the requirements in paragraphs (b)(1) and (2) of this section.

(1) Consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with the startup, shutdown, and malfunction plan.

(2) The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e).

Notifications, Reports, and Records

§ 63.9640 What notifications must I submit and when?

(a) You must submit all of the notifications in §§ 63.7(b) and (c), 63.8(f)(4), and 63.9(b) through (h) that apply to you by the specified dates.

(b) As specified in § 63.9(b)(2), if you start up your affected source before October 30, 2003, you must submit your initial notification no later than 120 calendar days after October 30, 2003.

(c) As specified in § 63.9(b)(3), if you start up your new affected source on or after October 30, 2003, you must submit your initial notification no later than 120 calendar days after you become subject to this subpart.

(d) If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin, as required in § 63.7(b)(1).

(e) If you are required to conduct a performance test or other initial compliance demonstration, you must submit a notification of compliance status according to § 63.9(h)(2)(ii). The initial notification of compliance status must be submitted by the dates specified in paragraphs (e)(1) and (2) of this section.

(1) For each initial compliance demonstration that does not include a performance test, you must submit the notification of compliance status before the close of business on the 30th calendar day following completion of the initial compliance demonstration.

(2) For each initial compliance demonstration that does include a performance test, you must submit the notification of compliance status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2).

§ 63.9641 What reports must I submit and when?

(a) *Compliance report due dates.* Unless the Administrator has approved a different schedule, you must submit a semiannual compliance report to your permitting authority according to the requirements in paragraphs (a)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.9583 and ending on June 30 or December 31, whichever date comes first after the compliance date that is specified for your source in § 63.9583.

(2) The first compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after your first compliance report is due.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through

June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than July 31 or January 31, whichever date comes first after the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (a)(1) through (4) of this section.

(b) *Compliance report contents.* Each compliance report must include the information in paragraphs (b)(1) through (3) of this section and, as applicable, in paragraphs (b)(4) through (8) of this section.

(1) Company name and address.

(2) Statement by a responsible official, with the official's name, title, and signature, certifying the truth, accuracy, and completeness of the content of the report.

(3) Date of report and beginning and ending dates of the reporting period.

(4) If you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i).

(5) If there were no deviations from the continuous compliance requirements in §§ 63.9634 through 63.9636 that apply to you, then provide a statement that there were no deviations from the emission limitations, work practice standards, or operation and maintenance requirements during the reporting period.

(6) If there were no periods during which a continuous monitoring system (including a CPMS or COMS) was out-of-control as specified in § 63.8(c)(7), then provide a statement that there were no periods during which a continuous monitoring system was out-of-control during the reporting period.

(7) For each deviation from an emission limitation in Table 1 to this subpart that occurs at an affected source where you are not using a continuous monitoring system (including a CPMS or COMS) to comply with an emission limitation in this subpart, the compliance report must contain the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(7)(i) and (ii) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The total operating time of each affected source during the reporting period.

(ii) Information on the number, duration, and cause of deviations (including unknown cause) as applicable, and the corrective action taken.

(8) For each deviation from an emission limitation occurring at an affected source where you are using a continuous monitoring system (including a CPMS or COMS) to comply with the emission limitation in this subpart, you must include the information in paragraphs (b)(1) through (4) of this section and the information in paragraphs (b)(8)(i) through (xi) of this section. This includes periods of startup, shutdown, and malfunction.

(i) The date and time that each malfunction started and stopped.

(ii) The date and time that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

(iii) The date, time, and duration that each continuous monitoring system was out-of-control, including the information in § 63.8(c)(8).

(iv) The date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(v) A summary of the total duration of the deviation during the reporting period and the total duration as a percent of the total source operating time during that reporting period.

(vi) A breakdown of the total duration of the deviations during the reporting period including those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(vii) A summary of the total duration of continuous monitoring system downtime during the reporting period and the total duration of continuous monitoring system downtime as a percent of the total source operating time during the reporting period.

(viii) A brief description of the process units.

(ix) A brief description of the continuous monitoring system.

(x) The date of the latest continuous monitoring system certification or audit.

(xi) A description of any changes in continuous monitoring systems, processes, or controls since the last reporting period.

(c) *Immediate startup, shutdown, and malfunction report.* If you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in § 63.10(d)(5)(ii).

(d) *Part 70 monitoring report.* If you have obtained a title V operating permit for an affected source pursuant to 40 CFR part 70 or 40 CFR part 71, you must report all deviations as defined in this subpart in the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A). If you submit a compliance report for an affected source along with, or as part of, the semiannual monitoring report required by 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), and the compliance report includes all the required information concerning deviations from any emission limitation or operation and maintenance requirement in this subpart, submission of the compliance report satisfies any obligation to report the same deviations in the semiannual monitoring report. However, submission of a compliance report does not otherwise affect any obligation you may have to report deviations from permit requirements for an affected source to your permitting authority.

(e) *Immediate corrective action report.* If you had three unsuccessful attempts of applying corrective action as described in § 63.9634(j) on an emission unit or group of emission units, then you must submit an immediate corrective action report. Within 5 calendar days after the third unsuccessful attempt at corrective action, you must submit to the Administrator a written report in accordance with § 63.9634(j)(3) and (4). This report must notify the Administrator that a deviation has occurred and document the types of corrective measures taken to address the problem that resulted in the deviation of established operating parameters and the resulting operating limits.

§ 63.9642 What records must I keep?

(a) You must keep the records listed in paragraphs (a)(1) through (3) of this section.

(1) A copy of each notification and report that you submitted to comply with this subpart, including all documentation supporting any initial notification or notification of compliance status that you submitted, according to the requirements in § 63.10(b)(2)(xiv).

(2) The records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction.

(3) Records of performance tests and performance evaluations as required in § 63.10(b)(2)(viii).

(b) For each COMS, you must keep the records specified in paragraphs (b)(1) through (4) of this section.

(1) Records described in § 63.10(b)(2)(vi) through (xi).

(2) Monitoring data for COMS during a performance evaluation as required in § 63.6(h)(7)(i) and (ii).

(3) Previous (that is, superceded) versions of the performance evaluation plan as required in § 63.8(d)(3).

(4) Records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(c) You must keep the records required in §§ 63.9634 through 63.9636 to show continuous compliance with each emission limitation, work practice standard, and operation and maintenance requirement that applies to you.

§ 63.9643 In what form and how long must I keep my records?

(a) Your records must be in a form suitable and readily available for expeditious review, according to § 63.10(b)(1).

(b) As specified in § 63.10(b)(1), you must keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record.

(c) You must keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record according to § 63.10(b)(1). You can keep the records offsite for the remaining 3 years.

Other Requirements and Information

§ 63.9650 What parts of the General Provisions apply to me?

Table 2 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

§ 63.9651 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by us, the EPA, or a delegated authority such as your State, local, or tribal agency. If the EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your State, local, or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a State, local, or tribal agency under subpart E of this part, the authorities contained in paragraph (c) of this section are retained by the Administrator of the EPA and are not transferred to the State, local, or tribal agency.

(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of non-opacity emission limitations and work practice standards under § 63.6(h)(9) and as defined in § 63.90.

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

§ 63.9652 What definitions apply to this subpart?

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

Affected source means each new or existing ore crushing and handling operation, ore dryer, indurating furnace, or finished pellet handling operation, at your taconite iron ore processing plant.

Bag leak detection system means a system that is capable of continuously monitoring relative particulate matter (dust) loadings in the exhaust of a baghouse to detect bag leaks and other upset conditions. A bag leak detection system includes, but is not limited to, an instrument that operates on triboelectric, light scattering, light transmittance, or other effect to continuously monitor relative particulate matter loadings.

Conveyor belt transfer point means a point in the conveying operation where the taconite ore or taconite pellets are transferred to or from a conveyor belt, except where the taconite ore or taconite pellets are being transferred to a bin or stockpile.

Crusher means a machine used to crush taconite ore and includes feeders or conveyors located immediately below the crushing surfaces. Crushers include, but are not limited to, gyratory crushers and cone crushers.

Deviation means any instance in which an affected source subject to this subpart, or an owner or operator of such a source:

(1) Fails to meet any requirement or obligation established by this subpart, including but not limited to any emission limitation (including operating limits) or operation and maintenance requirement;

(2) Fails to meet any term or condition that is adopted to implement an applicable requirement in this subpart and that is included in the operating permit for any affected source required to obtain such a permit; or

(3) Fails to meet any emission limitation in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart.

Dynamic wet scrubber means an air emissions control device which utilizes a mechanically powered fan to cause contact between the process exhaust gas stream and the scrubbing liquid which are introduced concurrently into the fan inlet.

Emission limitation means any emission limit, opacity limit, or operating limit.

Finished pellet handling means the transfer of fired taconite pellets from the indurating furnace to the finished pellet stockpiles at the plant. Finished pellet handling includes, but is not limited to, furnace discharge or grate discharge, and finished pellet screening, transfer, and storage. The atmospheric pellet cooler vent stack and gravity conveyor gallery vents designed to remove heat and water vapor from the structure are not included as a part of the finished pellet handling affected source.

Fugitive dust emission source means a stationary source from which particles are discharged to the atmosphere due to wind or mechanical inducement such as vehicle traffic. Fugitive dust sources include, but are not limited to:

(1) Stockpiles (includes, but is not limited to, stockpiles of uncrushed ore, crushed ore, or finished pellets);

(2) Material transfer points;

(3) Plant roadways;

(4) Tailings basins;

(5) Pellet loading areas; and

(6) Yard areas.

Grate feed means the transfer of unfired taconite pellets from the pelletizer into the indurating furnace.

Grate kiln indurating furnace means a furnace system that consists of a traveling grate, a rotary kiln, and an annular cooler. The grate kiln indurating furnace begins at the point where the grate feed conveyor discharges the green balls onto the furnace traveling grate and ends where the hardened pellets exit the cooler. The atmospheric pellet cooler vent stack is not included as part of the grate kiln indurating furnace.

Indurating means the process whereby unfired taconite pellets, called green balls, are hardened at high temperature in an indurating furnace. Types of indurating furnaces include straight grate indurating furnaces and grate kiln indurating furnaces.

Ore crushing and handling means the process whereby dry taconite ore is crushed and screened. Ore crushing and handling includes, but is not limited to, all dry crushing operations (*e.g.*, primary, secondary, and tertiary crushing), dry ore conveyance and transfer points, dry ore classification and screening, dry ore storage and stockpiling, dry milling, dry cobbing (*i.e.*, dry magnetic separation), and the grate feed. Ore crushing and handling specifically excludes any operations where the dry crushed ore is saturated with water, such as wet milling and wet magnetic separation.

Ore dryer means a rotary dryer that repeatedly tumbles wet taconite ore concentrate through a heated air stream to reduce the amount of entrained moisture in the taconite ore concentrate.

Pellet cooler vent stacks means atmospheric vents in the cooler section of the grate kiln indurating furnace that exhaust cooling air that is not returned for recuperation. Pellet cooler vent stacks are not to be confused with the cooler discharge stack, which is in the pellet loadout or dumping area.

Pellet loading area means that portion of a taconite iron ore processing plant where taconite pellets are loaded into trucks or railcars.

Responsible official means responsible official as defined in § 63.2.

Rod-deck venturi scrubber means a wet scrubber emission control device in which the inlet air flows through a bed of parallel metal pipes spaced apart to produce a series of parallel venturi throats.

Screen means a device for separating material according to size by passing undersize material through one or more mesh surfaces (screens) in series and retaining oversize material on the mesh surfaces (screens).

Storage bin means a facility for storage (including surge bins and hoppers) of taconite ore or taconite pellets prior to further processing or loading.

Straight grate indurating furnace means a furnace system that consists of a traveling grate that carries the taconite pellets through different furnace temperature zones. In the straight grate indurating furnace a layer of fired pellets, called the hearth layer, is placed on the traveling grate prior to the addition of unfired pellets. The straight grate indurating furnace begins at the point where the grate feed conveyor discharges the green balls onto the furnace traveling grate and ends where the hardened pellets drop off of the traveling grate.

Taconite iron ore processing means the separation and concentration of iron ore from taconite, a low-grade iron ore, to produce taconite pellets.

Taconite ore means a low-grade iron ore suitable for concentration of magnetite or hematite by fine grinding and magnetic or flotation treatment, from which pellets containing iron can be produced.

Tailings basin means a natural or artificial impoundment in which gangue or other refuse material resulting from the washing, concentration or treatment of ground taconite iron ore is confined.

Wet grinding and milling means the process whereby wet taconite ore is finely ground using rod and/or ball mills.

Tables to Subpart RRRRR of Part 63

As required in § 63.9590(a), you must comply with each applicable emission limit in the following table:

TABLE 1 TO SUBPART RRRRR OF PART 63.—EMISSION LIMITS

If your affected source is . . .	and the affected source is categorized as . . .	then you must comply with the flow-weighted mean concentration of particulate matter discharged to the atmosphere from the affected source, as determined using the procedures in § 63.9621(b), such that you must not exceed . . .
1. Ore crushing and handling emission units	Existing	0.008 grains per dry standard cubic foot (gr/dscf).
	New	0.005 gr/dscf.
2. Straight grate indurating furnace processing magnetite	Existing	0.01 gr/dscf.
	New	0.006 gr/dscf.
3. Grate kiln indurating furnace processing magnetite	Existing	0.01 gr/dscf.
	New	0.006 gr/dscf.
4. Grate kiln indurating furnace processing hematite	Existing	0.03 gr/dscf.
	New	0.018 gr/dscf.
5. Finished pellet handling emission units	Existing	0.008 gr/dscf.
	New	0.005 gr/dscf.
6. Ore dryer	Existing	0.052 gr/dscf.
	New	0.025 gr/dscf.

As required in § 63.9650, you must comply with the requirements of the NESHAP General Provisions (40 CFR part 63, subpart A) shown in the following table:

TABLE 2 TO SUBPART RRRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART RRRRR OF PART 63

Citation	Subject	Applies to Subpart RRRRR	Explanation
§ 63.1	Applicability	Yes.	
§ 63.2	Definitions	Yes.	
§ 63.3	Units and Abbreviations	Yes.	
§ 63.4	Prohibited Activities	Yes.	
§ 63.5	Construction/Reconstruction	Yes.	

TABLE 2 TO SUBPART RRRRR OF PART 63.—APPLICABILITY OF GENERAL PROVISIONS—Continued TO SUBPART RRRRR OF PART 63

Citation	Subject	Applies to Subpart RRRRR	Explanation
§ 63.6(a)–(g)	Compliance With Standards and Maintenance Requirements.	Yes.	
§ 63.6(h)	Compliance With Opacity and Visible Emission (VE) Standards.	No	Subpart RRRRR does not contain opacity and VE standards.
§ 63.6(i), (j)	Extension of Compliance and Presidential Compliance Extension.	Yes.	
§ 63.7(a)(1)–(2)	Applicability and Performance Test Dates.	No	Subpart RRRRR specifies performance test applicability and dates.
§ 63.7(a)(3), (b)–(h)	Performance Testing Requirements	Yes.	
§ 63.8(a)(1)–(a)(3), (b), (c)(1)–(3), (c)(5)–(8), (d), (e), (f)(1)–(5), (g)(1)–(4).	Monitoring Requirements	Yes	Continuous monitoring system (CMS) requirements in § 63.8(c)(5) and (6) apply only to COMS for dry electrostatic precipitators.
§ 63.8(a)(4)	Additional Monitoring Requirements for Control Devices in § 63.11.	No	Subpart RRRRR does not require flares.
§ 63.8(c)(4)	Continuous Monitoring System Requirements.	No	Subpart RRRRR specifies requirements for operation of CMS.
§ 63.8(f)(6)	Relative Accuracy Test Alternative (RATA).	No	Subpart RRRRR does not require continuous emission monitoring systems.
§ 63.8(g)(5)	Data Reduction	No	Subpart RRRRR specifies data reduction requirements.
§ 63.9	Notification Requirements	Yes	Additional notifications for CMS in § 63.9(g) apply to COMS for dry electrostatic precipitators.
§ 63.10(a), (b)(1)–(2)(xii), (b)(2)(xiv), (b)(3), (c)(1)–(6), (c)(9)–(15), (d)(1)–(2), (d)(4)–(5), (e), (f).	Recordkeeping and Reporting Requirements.	Yes	Additional records for CMS in § 63.10(c)(1)–(6), (9)–(15), and reports in § 63.10(d)(1)–(2) apply only to COMS for dry electrostatic precipitators.
§ 63.10(b)(2)(xiii)	CMS Records for RATA Alternative	No	Subpart RRRRR doesn't require continuous emission monitoring systems.
§ 63.10(c)(7)–(8)	Records of Excess Emissions and Parameter Monitoring Exceedances for CMS.	No	Subpart RRRRR specifies record requirements.
§ 63.10(d)(3)	Reporting opacity or VE observations	No	Subpart RRRRR does not have opacity and VE standards.
§ 63.11	Control Device Requirements	No	Subpart RRRRR does not require flares.
§ 63.12	State Authority and Delegations	Yes.	
§ 63.13–§ 63.15	Addresses, Incorporation by Reference, Availability of Information.	Yes.	

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