ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[Docket ID No. OAR–2002–0039; FRL–7417–1]

RIN 2060–AJ02

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

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: This action proposes national emission standards for hazardous air pollutants (NESHAP) for taconite iron ore processing plants. The EPA has identified taconite iron ore processing plants as a major source of hazardous air pollutant (HAP) emissions. These proposed 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 plants in the taconite iron ore processing source category include metal compounds (primarily manganese, arsenic, lead, nickel, and chromium), products of incomplete combustion (primarily formaldehyde), and acid gases (hydrochloric acid and hydrofluoric acid). Exposure of these substances has been demonstrated to cause adverse health effects, including chronic and acute disorders of the blood, heart, kidneys, liver, reproductive system, respiratory system, and central nervous system. Some of these pollutants are considered to be carcinogens.

DATES: *Comments.* Submit comments on or before February 18, 2003.

Public Hearing. If anyone contacts the EPA requesting to speak at a public hearing by January 7, 2003, a public hearing will be held on January 17, 2003.

ADDRESSES: *Comments.* Comments may be submitted electronically, by mail, by facsimile, or through hand delivery/courier. Send comments (in duplicate, if possible) to: Taconite Iron Ore Processing NESHAP Docket, EPA Docket Center (Air Docket), U.S. EPA West, Mail Code 6102T, Room B108, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, Attention Docket ID No. OAR–2002–0039. Follow the detailed instructions as provided in the **SUPPLEMENTARY INFORMATION** section.

Public Hearing. If a public hearing is held, it will be held at the new EPA facility complex in Research Triangle Park, NC beginning at 10 a.m.

FOR FURTHER INFORMATION CONTACT: Conrad Chin, Metals Group, Emission Standards Division (C439–02), Research Triangle Park, NC 27711, telephone number (919) 541–1512, electronic mail address: chin.conrad@epa.gov.

SUPPLEMENTARY INFORMATION:

Regulated Entities

Category	NAICS*	Example of regulated entities
Taconite Iron Ore Processing Facilities	21221	Taconite Iron Ore Processing Facilities [taconite ore crushing and handling operations, indurating furnaces, finished pellet handling operations, and ore dryers].

*North American Information 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 plant is regulated by this action, you should examine the applicability criteria in § 63.9581 of the proposed 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 under Docket ID No. OAR–2002–0039. The official public docket is the collection of materials that is available for public viewing in the Taconite Iron Ore Processing NESHAP Docket at the EPA Docket Center (Air Docket), EPA West, Room B108, 1301 Constitution Avenue, NW., Washington, DC 20460. The Docket Center is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Air Docket is (202) 566–1742.

Electronic Access

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 submit or review public comments, access the index 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.

Certain types of information will not be placed in the EPA dockets. Information claimed as confidential business information (CBI) and other information whose disclosure is restricted by statue, which is not included in the official public docket, will not be available for public viewing in EPA's electronic public docket. EPA's policy is that copyrighted material will not be placed in EPA's electronic public docket but will be available only in printed, paper form in the official public docket. Although not all docket materials may be available electronically, you may still access any of the publicly available docket materials through the docket facility identified in this document.

For public commenters, it is important to note that EPA's policy is that public comments, whether submitted electronically or in paper, will be made available for public viewing in EPA's electronic public docket as EPA receives them and without change, unless the comment contains copyrighted material, CBI, or other information whose disclosure is restricted by statue. When EPA identifies a comment containing copyrighted material, EPA will provide a reference to that material in the version of the comment that is placed in EPA's electronic public docket. The entire printed comment, including the copyrighted material, will be available in the public docket.

Public comments submitted on computer disks that are mailed or delivered to the docket will be transferred to EPA's electronic public docket. Public comments that are mailed or delivered to the docket will be scanned and placed in EPA's electronic public docket. Where practical, physical objects will be photographed, and the photograph will be placed in EPA's electronic public docket along with a brief description written by the docket staff.

Comments

You may submit comments electronically, by mail, by facsimile, or through hand delivery/courier. To ensure proper receipt by EPA, identify the appropriate docket identification number in the subject line on the first page of your comment. Please ensure that your comments are submitted within the specified comment period. Comments submitted after the close of the comment period will be marked ''late.'' EPA is not required to consider these late comments.

Electronically

If you submit an electronic comment as prescribed below, EPA recommends that you include your name, mailing address, and an e-mail address or other contact information in the body of your comment. Also include this contact information on the outside of any disk or CD ROM you submit and in any cover letter accompanying the disk or CD ROM. This ensures that you can be identified as the submitter of the comment and allows EPA to contact you in case EPA cannot read your comment due to technical difficulties or needs further information on the substance of your comment. EPA's policy is that EPA will not edit your comment, and any identifying or contact information provided in the body of a comment will be included as part of the comment that is placed in the official public docket and made available in EPA's electronic public docket. If EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, EPA may not be able to consider your comment.

Your use of EPA's electronic public docket to submit comments to EPA electronically is EPA's preferred method for receiving comments. Go directly to EPA Dockets at *http://www.epa.gov/edocket* and follow the online instructions for submitting comments. Once in the system, select ''search'' and then key in Docket ID No. OAR–2002–0039. The system is an ''anonymous access'' system, which means EPA will not know your identity, e-mail address, or other contact information unless you provide it in the body of your comment.

Comments may be sent by electronic mail (e-mail) to *air-and-r-docket@epa.gov,* Attention Docket ID No. OAR–2002–0039. In contrast to EPA's electronic public docket, EPA's e-mail system is not an ''anonymous access'' system. If you send an e-mail comment directly to the Docket without going through EPA's electronic public docket, EPA's e-mail system automatically captures your e-mail address. E-mail addresses that are automatically captured by EPA's e-mail system are included as part of the comment that is placed in the official public docket and made available in EPA's electronic public docket.

You may submit comments on a disk or CD ROM that you mail to the mailing address identified in this document. These electronic submissions will be accepted in Wordperfect or ASCII file format. Avoid the use of special characters and any form of encryption.

By Mail

Send your comments (in duplicate, if possible) to: Taconite Iron Ore Processing NESHAP Docket, EPA Docket Center (Air Docket), U.S. EPA West, Mail Code 6102T, Room B108, 1200 Pennsylvania Avenue, NW., Washington, DC 20460, Attention Docket ID No. OAR–2002–0039.

By Hand Delivery or Courier

Deliver your comments (in duplicate, if possible) to: EPA Docket Center, U.S. EPA West, Mail Code 6102T, Room B108, 1301 Constitution Avenue, NW., Washington, DC 20004, Attention Docket ID No. OAR–2002–0039. Such deliveries are only accepted during the Docket Center's normal hours of operation as identified in this document.

By Facsimile

Fax your comments to: (202) 566–1741, Attention Taconite Iron Ore Processing NESHAP Docket, Docket ID No. OAR–2002–0039.

CBI

Do not submit information that you consider to be CBI through EPA's electronic public docket or by e-mail. Send or deliver information identified as CBI only to the following address: Roberto Morales, OAQPS Document Control Officer (C404–02), U.S. EPA, 109 TW Alexander Drive, Research Triangle Park, NC 27709, Attention Docket ID No. OAR–2002–0039. You may claim information that you submit to EPA as CBI by marking any part or all of that information as CBI (if you submit CBI on disk or CD ROM, mark the outside of the disk or CD ROM as CBI and then identify electronically within the disk or CD ROM the specific information that is CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR part 2.

Public Hearing

Persons interested in presenting oral testimony or inquiring as to whether a hearing is to be held should contact Ms. Cassie Posey, Metals Group, Emission Standards Division (C439–02), Research Triangle Park, NC 27711, telephone number (919) 541–0069, in advance of the public hearing. Persons interested in attending the public hearing must also call Ms. Cassie Posey to verify the time, date, and location of the hearing. The public hearing will provide interested parties the opportunity to present data, views, or arguments concerning these proposed emission standards.

Worldwide Web (WWW)

In addition to being available in the docket, an electronic copy of today's proposal will also be available on the WWW through the Technology Transfer Network (TTN). Following signature, a copy of this action will be posted on the TTN's policy and guidance page for newly proposed 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.

Outline

The information presented in this preamble is organized as follows:

I. Background

A. What Is the Source of Authority for Development of NESHAP?

Section 112 of the CAA requires us to list categories and subcategories of major sources and area sources of HAP and to establish NESHAP for the listed source categories and subcategories. The category of major sources covered by today's proposed NESHAP, Taconite Iron Ore Processing, was listed on July 16, 1992 (57 FR 31576). Major sources of HAP are those that have the potential to emit greater than 10 tons/yr of any one HAP or 25 tons/yr of any combination of HAP.

B. What Criteria Are Used in the Development of NESHAP?

Section 112 of the CAA requires that we establish NESHAP for the control of HAP from both new and existing major sources. The CAA requires the NESHAP to reflect the maximum degree of reduction in emissions of HAP that is achievable. This level of control is commonly referred to as MACT.

The MACT floor is the minimum control level allowed for NESHAP and is defined under section 112(d)(3) of the CAA. In essence, the MACT floor ensures that the standard is set at a level that assures that all major sources achieve the level of control at least as stringent as that already achieved by the better-controlled and lower-emitting sources in each source category or subcategory. For new sources, the MACT floor cannot be less stringent than the emission control that is achieved in practice by the best-controlled similar source. The MACT standards for existing sources can be less stringent than standards for new sources, but they cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing 5 sources for categories or subcategories with fewer than 30 sources).

In developing MACT, we also consider control options that are more stringent than the floor. We may establish standards more stringent than the floor based on the consideration of cost of achieving the emissions reductions, any health and environmental impacts, and energy requirements.

C. What Source Category Is Affected by This Proposed Rule?

Section 112(c) of the CAA requires us to list all categories of major and area sources of HAP for which we will develop national emission standards. We published the initial list of source categories on July 16, 1992 (57 FR 31576). ''Taconite Iron Ore Processing'' is one of the source categories on the initial list. The listing was based on our determination that taconite iron ore processing plants may reasonably be anticipated to emit a variety of HAP listed in section 112(b) in quantities sufficient to be major sources.

A taconite iron ore processing plant separates and concentrates iron ore from taconite, a low-grade iron ore, and produces taconite pellets, which are approximately 60 percent iron. The taconite iron ore processing source category includes, but is not limited to, ore crushing and handling units, ore dryers, indurating furnaces, and finished pellet handling units. At present, taconite iron ore pellets are produced at eight plant sites in the U.S.; six plants are in Minnesota and two plants are in Michigan.

D. What Processes Are Used at Taconite Iron Ore Processing Plants?

Taconite iron ore processing includes crushing and handling of the crude ore; concentrating (milling, magnetic separation, chemical flotation, etc.); agglomerating (dewatering, drying, and balling); indurating; and finished pellet handling. The main processes of interest because of their potential to generate HAP emissions include ore crushing and handling, ore drying, indurating, and finished pellet handling.

Taconite ore is obtained from the ground using a strip mining process. First, millions of tons of surface material and rock are removed to expose the taconite ore-bearing rock layers. Next, the taconite ore is blasted, scooped up with large cranes with shovels, and loaded into transport vehicles such as 240-ton haulage trucks or railcars. The transport vehicles move the ore from the mine to the primary crushers. At most plants the mine is located adjacent to the ore processing plant. However, at a few plants the mine and the ore processing plant are miles apart. In these cases, the taconite ore is loaded onto railcars and transported by train to the processing plant.

The ore crushing process begins where the taconite ore from the mine is dumped from trucks or railcars into the primary crusher or into feed stockpiles for the primary crusher. The ore is dry-crushed in one to four stages depending on the hardness of the ore. Gyratory cone crushers are generally used for all stages of crushing. Primary crushing reduces the crude ore from run-of-mine size to a size about six inches in diameter, while fine crushing further reduces the material to a size about ¾ of an inch in diameter. Intermediate vibratory screens remove the undersized material from the feed before it enters the next crusher. Dry ore crushing and handling also includes a number of conveying and transfer points as the ore is moved from one crushing stage to the next. After it is adequately crushed, the ore is conveyed to large ore storage bins at the concentrator building.

In the concentrator building, water is typically added to the ore as it is conveyed into rod and ball mills which further grind the taconite ore to the consistency of coarse beach sand. A rod/ball mill is a large horizontal cylinder that rotates on its horizontal axis and is charged with heavy steel rods or balls and the taconite ore/water slurry. As the rods/balls tumble inside the mill, they grind the ore into finer particles.

In a subsequent process step, taconite ore is separated from the waste rock material using a magnetic separation process. During magnetic separation, a series of magnetized cylinders rotate while submerged in the taconite iron ore slurry. The iron-bearing taconite particles adhere to the magnetized cylinder surface and are collected as a iron-rich slurry. The iron content of the slurry is further increased using a combination of hydraulic concentration (gravity settling) and chemical flotation.

Since the concentrating processes are completely wet operations, any potential particulate or HAP metal emissions are suppressed. However, there are exceptions, such as one plant that conducts dry cobbing (a dry magnetic separation process) instead of a wet magnetic separation process.

The concentrated taconite slurry then enters the agglomerating process. Water is typically removed from the taconite slurry using vacuum disk filters or similar equipment. One plant, which processes a finer grained ore, uses rotary dryers after the disc filters to dry the ore further. These dryers are rotary dryers, which repeatedly tumble the wet ore concentrate through a heated air stream to reduce the amount of entrained moisture in the ore. Next, the taconite is mixed with various binding agents such as bentonite or dolomite in a balling drum which tumbles and rolls the taconite into unfired pellets. When the unfired pellets exit the balling drum, they are transferred to a metal grate that conveys them to the furnace. Once the pellets exit the balling drum they are relatively dry and, therefore, have the potential to emit particulate HAP.

During the indurating process, the unfired taconite pellets are hardened and oxidized in the indurating furnace at a fusion temperature between 2,290 to 2,550 °F. Two types of indurating furnaces are currently used within this source category: straight grate furnaces and grate kiln furnaces. The indurating furnace process begins at the point where the grate feed conveyor discharges the unfired pellets onto the furnace traveling grate and ends where the hardened pellets exit the indurating furnace cooler.

In straight grate indurating furnaces, a continuous bed of unfired pellets is carried on a metal grate through different furnace temperature zones. Each zone will have either a heated upward draft or downward draft blown through the pellets. A layer of fired pellets is placed on the metal grate prior to the addition of unfired pellets. This hearth-layer allows for even airflow through the pellet bed and acts as a buffer between the metal grate and the exothermic heat generated from the oxidation of taconite pellets in the indurating stage. Before the pellets can be oxidized, all remaining moisture is driven off in the first two stages of the furnace, the updraft and downdraft drying zones. Unfired pellets must be heated gradually; otherwise, moisture in the unfired pellets expands too quickly and causes the pellets to explode. After they are dried, the pellets enter a preheat zone of the furnace where the temperature is gradually increased for the indurating stage. The next zone is the actual firing zone for induration, where the pellets are exposed to the highest temperature. The fired pellets then enter the post-firing zone, where the oxidation process is completed. Finally, the pellets are cooled by the intake of ambient air typically in two stages of cooling. A unique characteristic of straight grate furnaces is that approximately 30 percent of the fired pellets are recycled to the feed end of the furnace for use as the hearth layer. The remaining pellets are transported by conveyor belts to storage areas.

Waste gases from the straight grate furnace are discharged primarily through two ducts: the hood exhaust, which handles the cooling and drying gases; and the windbox exhaust, which handles the preheat, firing, and after-firing gases. For a typical straight grate furnace, the two discharge ducts are combined into one common header before the flow is divided into several ducts to be exhausted to the atmosphere after control.

The grate kiln indurating furnace system consists of a traveling grate, a rotary kiln, and an annular cooler. The grate kiln system represents a newer generation of indurating furnaces and is widely used by the taconite plants. As with the straight grate furnace system, the grate kiln system is also a counterflow heat exchanger, with the unfired pellets and indurated pellets moving in a direction opposite to that of the process gas flow. A six-inch bed of unfired pellets is laid on a continuously moving, horizontal grate. The traveling grate carries the unfired pellets into a dryer/preheater that resembles a large rectangular oven. In the first half of the traveling grate, unfired pellets are gradually dried by hot air at a temperature of 700 °F. The second half of the traveling grate is called the preheater, where the unfired pellets are heated to a temperature of 2,000 °F prior to dropping into the rotary kiln furnace.

Pellets are discharged from the traveling grate and into the rotary kiln. Final indurating of the pellets occurs in the kiln as the pellets tumble down the rotating kiln. The rotary kiln typically operates at a temperature of 2,300 to 2,400 °F to ensure that the kiln oxidizes the iron pellets from a magnetite structure into a hematite structure. The hardened pellets are then discharged to a large annular-shaped cooler, which is an integral part of an elaborate energy recuperation system. The fired pellets discharged from the kiln first enter the primary cooling zone of the annular cooler, where ambient air is brought in to cool the pellets in a counter-current flow. After the pellets heat the ambient air to approximately 2,000 °F, it is then used as preheated combustion air in the rotary kiln. As the cooled pellets enter a final cooling zone, additional ambient air is used to cool the pellets further. Air exiting the final cooling zone is heated to approximately 1,000 °F and is used to maintain the temperature in the dryer section of the traveling grate. Pellets exiting the final cooling zone are cooled to an average temperature of 175 to 225 °F. Combustion air from the rotary kiln, which is approximately 2,000 °F, is used to maintain the temperature in the preheat section of the traveling grate.

Pellet cooler vent stacks are atmospheric vents in the cooler section of a grate kiln indurating furnace. Pellet cooler vent stacks exhaust cooling air that is not returned for heat recuperation. Straight grate furnaces do not have pellet cooler vent stacks. The pellet cooler vent stack should not be confused with the cooler discharge stack, which is in the pellet loadout or dumping area. New grate kiln furnace designs eliminate the cooler vent stack by recirculating the air through the furnace.

The finished pellet handling process begins where the fired taconite pellets exit the indurating furnace cooler (*i.e.*, pellet loadout) and ends at the finished pellet stockpile. Operations include finished pellet screening, transfer, and storage.

E. What HAP Are Emitted and How Are They Controlled?

Ore crushing and handling, ore drying, and finished pellet handling are all potentially significant points of particulate matter (PM) emissions. In addition, because taconite ore inherently contains trace metals, such as manganese, chromium, cobalt, arsenic, and lead, they are also emitters of HAP metal compounds. Manganese compounds are the predominate metal HAP emitted from ore crushing and handling, ore drying, and finished pellet handling, accounting for 10 tons/year. All other metal HAP compounds are emitted from ore crushing and handling, ore drying, and finished pellet handling at rates of less than 0.1 tons per year.

Approximately 70 percent of the ore crushing and handling and finished pellet handling units control PM emissions with wet scrubbers, such as venturi scrubbers, marble bed scrubbers, or impingement scrubbers. The remaining units control PM emissions with baghouses, low energy scrubbers (*i.e.*, rotoclones), multiclones, and electrostatic precipitators (ESP). The two ore dryers are controlled by cyclones and impingement scrubbers in series.

The indurating furnaces are the most significant sources of HAP emissions, accounting for about 99 percent of the total HAP emissions from the taconite iron ore processing source category. Three types of HAP are emitted from the waste gas stacks of indurating furnaces. The first type of HAP is metallic HAP existing as a portion of particulate emissions from the taconite ore or fuel (such as coal) fed into the furnaces. Manganese and arsenic compounds are the predominate metal HAP emitted by indurating furnaces (approximately 5.8 and 6.5 tons/year, respectively, for the industry); chromium, lead, and nickel compounds are emitted in smaller amounts (each approximately between 2 to 5 tons/year for the industry); and antimony, beryllium, cadmium, cobalt, mercury, and selenium compounds are emitted in yet smaller amounts (each approximately less than 1 ton/year for the industry). The second type of HAP is organic HAP resulting as products of incomplete combustion, primarily formaldehyde. Emissions test data from indurating furnaces confirm the presence of formaldehyde. The third type of HAP is acidic gases, such as hydrochloric acid and hydrofluoric acid. Fluorine and chlorine compounds in the raw materials are liberated during the indurating process and combine with moisture in the exhaust to form hydrochloric acid and hydrofluoric acid. Both formaldehyde and the acid gases are present in exhaust gas from the indurating furnace stacks at concentrations around a few parts per million (ppm). Formaldehyde emissions from the entire industry are estimated to be 181 tons/year. Total emissions of hydrogen chloride and hydrogen fluoride are approximately 349 and 308 tons/year, respectively.

Emissions from the indurating furnace stacks are typically controlled with either a venturi wet scrubber or an ESP. One indurating furnace controls emissions with a multiclone and another furnace controls emissions with a gravity collector.

F. What Are the Health Effects Associated With Emissions From Taconite Iron Ore Processing Plants?

As previously mentioned in this preamble, there are a variety of metal HAP contained in the PM emitted from taconite iron ore processing. These include primarily manganese and arsenic compounds, with smaller quantities of lead, nickel and chromium compounds. Antimony, beryllium, cadmium, cobalt, mercury, and selenium compounds are emitted in yet smaller amounts. Other HAP, such as formaldehyde, hydrochloric acid, and hydrofluoric acid, are present in the waste gas stream from the indurating furnace pelletizing stacks on the order of ppm.

Manganese and arsenic compounds comprise the majority of the metal HAP emissions. Adverse health effects in humans have been associated with manganese dietary deficiencies and excessive exposure to manganese. Chronic exposure to low levels of manganese in the diet is considered to be nutritionally essential in humans, with a recommended daily allowance of 2 to 5 milligrams per day. Chronic exposure to high levels of manganese by inhalation in humans results primarily in central nervous system effects. Visual reaction time, hand steadiness, and eye-hand coordination were affected in chronically-exposed workers. Manganism, characterized by feelings of weakness and lethargy, tremors, a mask-like face, and psychological disturbances, may result from chronic exposure to higher levels. Impotence and loss of libido have been noted in male workers afflicted with manganism attributed to inhalation exposures. We have classified manganese in Group D, not classifiable as to carcinogenicity in humans.

Arsenic can be toxic in humans. Acute inhalation exposure to arsenic causes gastrointestinal effects, such as nausea, diarrhea, and abdominal pain, hemolysis, and central nervous system disorders. Chronic inhalation exposure to inorganic arsenic is associated with irritation of the skin and mucous membranes and is strongly associated with lung cancer. We have classified inorganic arsenic as a Group A, a known human carcinogen of high carcinogenic hazard.

Exposure to formaldehyde can result in irritation of the skin and mucous membranes. We have classified formaldehyde as a Group B1, probable human carcinogen of medium carcinogenic hazard.

Acute exposure to the acid gases can cause severe respiratory damage in humans including severe irritation and pulmonary edema. Chronic exposure to hydrochloric acid has been reported to cause gastritis, chronic bronchitis, and dermatitis in workers. Chronic exposure to low levels of fluoride has a beneficial effect of dental cavity prevention and may be helpful in the treatment of osteoporosis. However, exposure to higher levels of hydrochloric or hydrofluoric acid may cause dental discoloration and erosion.

In addition to HAP, the proposed rule would also reduce PM emissions, which are controlled under national ambient air quality standards. Emissions of PM have been associated with aggravation of existing respiratory and cardiovascular disease and increased risk of premature death.

We recognize that the degree of adverse effects to health experienced by exposed individuals can range from mild to severe. 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.

II. Summary of the Proposed Rule

A. What Are the Affected Sources and Emission Points?

The proposed rule would affect eight plants engaged in the processing of taconite iron ore (six plants in Minnesota and two plants in Michigan). The affected sources within each plant include ore crushing and handling, ore dryers, indurating furnaces, and finished pellet handling. The ore crushing and handling affected source includes the collection of all new and existing ore crushing and handling emission units including all primary, secondary, and tertiary crushers; associated screens, conveyors, storage bins and piles; transfer points; and grate feed. The ore dryer affected source includes each new or existing individual ore dryer. The indurating furnace affected source includes each new or existing individual indurating furnace. The finished pellet handling affected source includes the collection of all new and existing pellet handling emission units including all pellet screens, conveyors, storage bins, piles, and transfer points.

An existing affected source is one constructed or reconstructed on or before December 18, 2002. A new affected source is one constructed or reconstructed after December 18, 2002.

B. What Are the Emission Limitations and Work Practice Standards?

The proposed rule includes PM emission limits, work practice standards, and operating limits for control devices. Particulate matter serves as a surrogate measure of metallic HAP emissions.

The proposed PM emissions limits for ore crushing and handling and finished pellet handling operations 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 proposed PM emissions limits for ore crushing and handling are determined based on the flow-weighted mean concentration of emissions for all ore crushing and handling units at the plant. Similarly, compliance with the proposed PM emissions limits for finished pellet handling are determined based on the flow-weighted mean concentration of PM emissions for all pellet handling units at the plant.

The proposed rule would establish PM emission limits that must be achieved by each individual ore dryer. The proposed emission limit is 0.052 gr/dscf for existing dryers and 0.025 gr/dscf for new dryers. Ore dryers with multiple stacks would calculate their PM emissions as a flow-weighted mean concentration of PM emissions from all stacks.

The proposed rule would establish PM emission limits that must be achieved by each individual indurating furnace. Indurating furnaces with multiple stacks would calculate their PM emissions as a flow-weighted mean concentration of PM emissions from all stacks. For each straight grate indurating furnace processing magnetite, the proposed emissions limit is 0.010 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 proposed emissions limit is 0.011 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 proposed emissions limit is 0.025 gr/dscf for existing grate kiln furnaces and 0.018 gr/dscf for new grate kiln furnaces.

The proposed rule also includes specific requirements for continuous parameter monitoring and associated operating limits for baghouses, wet scrubbers, and dry ESP. Baghouses are to be equipped with a bag leak detection system (BLDS) capable of monitoring relative changes in PM loading in the baghouse exhaust, which is to alarm whenever a predetermined set point is exceeded, indicating an increase in emissions above that allowed at the set point. The proposed rule would limit the frequency and duration of alarms to no more than 5 percent of a source's total operating time in any semiannual reporting period. In the case of wet scrubbers, sources would be required to continuously monitor scrubber pressure drop and water flow rate and operate at all times at or above specified hourly average values established during initial performance testing. For dry ESP, sources would be required to install and operate continuous opacity monitoring systems (COMS). Each source must report as a deviation any 6-minute period during which the average opacity exceeds the opacity value corresponding to the 99 percent upper confidence level established during the performance test. The proposed rule would require sources to submit information on alternative monitoring parameters and operating limits if a control device other than a baghouse, wet scrubber, or dry ESP is used.

All plants subject to the proposed rule would be required to prepare and implement a written fugitive dust emissions control plan. The plan would describe 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.

C. What Are the Operation and Maintenance Requirements?

All plants subject to the proposed rule would be required to prepare and implement a written startup, shutdown, and malfunction plan according to the requirements in 40 CFR 63.6(e) of the NESHAP General Provisions. In addition, a written operation and maintenance plan is also required for each control device subject to an operating limit. This plan must describe procedures for the inspection and preventative maintenance of control devices, as well as corrective action requirements specific to baghouses equipped with bag leak detection systems. 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.

D. What Are the Initial Compliance Requirements?

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 all cases, initial compliance must be demonstrated through a performance test. The performance test must be conducted using EPA Method 5 or 17 in 40 CFR part 60, appendix A. All initial compliance tests must be completed no later than 2 years following the compliance date. In lieu of conducting performance tests for all emission units, the plant may elect to group similar emission units together and conduct initial performance tests on a representative sample of units 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(s) that will be tested for each group, and 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 for each furnace or each ore dryer must not exceed the applicable PM emission limit. Initial compliance must be demonstrated through an initial performance test. The performance test must be conducted using EPA Method 5 or 17 in 40 CFR part 60, appendix A. The initial compliance test for each indurating furnace and each ore dryer must be completed no later than 180 calendar days after the compliance date. For indurating furnaces and ore dryers with multiple stacks, all stacks for the indurating furnace or ore dryer must be tested simultaneously.

The proposed rule would also require that certain operating limits on control devices be established during the initial compliance test to ensure that control devices operate properly on a continuing basis. All operating limits must be established during a performance test that demonstrates compliance with the applicable emission limit. During the initial compliance tests, operating limits must be established for pressure drop and scrubber water flow rate for all wet scrubbers, and opacity (using a COMS) for dry ESP.

To demonstrate initial compliance with the proposed work practice standards, plants would prepare, submit, and implement a fugitive dust emission control plan on or before the applicable compliance date as specified in § 63.9583 of the proposed rule. To demonstrate initial compliance with the proposed operation and maintenance requirements, plants would certify in their notification of compliance status that they have prepared the written plans and will operate control devices according to the procedures in the plan.

E. What Are the Continuous Compliance Requirements?

For ore crushing and handling, ore dryers and finished pellet handling units, the proposed rule would require plants to 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, the plant must submit a testing plan and schedule to the permitting authority for approval.

For each indurating furnace, the proposed rule would require subsequent testing of all stacks based on the schedule established in each plant's title V operating permit, but no less frequent than twice per 5-year permit term. If a title V permit has not been issued, then the plant must submit a testing plan and schedule to the permitting authority for approval. The testing frequency in the testing plan must be no less frequent than twice per 5-year period.

Plants 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, plants 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 continuous parameter monitoring system (CPMS).

For baghouses, plants are required to monitor the relative change in PM loading using a bag leak detection system and 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 in a manner 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 proposed rule would require records of bag leak detection system alarms and records documenting conformance with the operation and maintenance plan, as well as the inspection and maintenance procedures.

For scrubbers, plants would be required to use a CPMS to measure and record the hourly average pressure drop and scrubber water flow rate. To demonstrate continuous compliance, plants would keep records documenting conformance with the monitoring requirements and the installation, operation, and maintenance requirements for the CPMS.

For dry ESP, plants are required to use a COMS to measure and record the average hourly opacity of emissions exiting each stack of the control device. Plants must operate and maintain the COMS according to the requirements in 40 CFR 63.8 of the NESHAP General Provisions and Performance Specification 1 in 40 CFR part 60, appendix B. These requirements include a quality control program that consists of a daily calibration drift assessment, quarterly performance audit, and annual zero alignment.

F. What are the Notification, Recordkeeping, and Reporting Requirements?

The proposed notification, recordkeeping, and reporting requirements are based on the NESHAP General Provisions in 40 CFR part 63, subpart A. Table 2 of the proposed rule lists each of the requirements in the General Provisions (§§ 63.2 through 63.15) with an indication of whether they do or do not apply.

The plant owner or operator is required to submit each initial notification required in the NESHAP General Provisions that applies to their plant. These include an initial notification of applicability with general information about the plant and notifications of performance tests and compliance status.

Plants 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 for control devices, 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 proposed rule would require that the operation and maintenance plan for control devices subject to an operating limit, 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 rule requirements.

Semiannual reports are required for any deviation from an emission limitation, including an operating limit. 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 there were actions taken during a startup, shutdown, or malfunction that were not consistent with the startup, shutdown, and malfunction plan and the source exceeded its emission limit. Deviations that occur during a period of startup, shutdown, or malfunction are not violations if the owner or operator demonstrates to the authority with delegation for enforcement that the source was operating in accordance with the startup, shutdown, and malfunction plan.

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

G. What are the Compliance Deadlines?

The owner or operator of an existing affected source must comply within [DATE 3 YEARS AFTER PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**]. New or reconstructed sources that startup on or before the effective date of the final rule must comply by the effective date of the final rule. New or reconstructed sources that startup after the effective date of the final rule must comply upon initial startup.

III. Rationale for Selecting the Proposed Standards

A. How Did We Select the Affected Sources?

An affected source is the collection of equipment, processes and activities within a source category to which an emission limitation, work practice standard, or other regulatory requirement in a MACT standard will apply. Depending on circumstance, we have adopted broader or narrower definitions of affected source. In some instances, we have adopted a definition as broad as all processes, equipment and activities at a source, while in other instances, we have defined affected source as narrowly as a single piece of equipment. The selection of affected source is guided by the consideration of many factors including similarities and dissimilarities in emission units in terms of their size, type, and HAP emissions potential; the functional relationship of an emission unit or grouping of units within a plant or process; and the effect of an affected source definition on when and where new source MACT should apply.

We considered three different approaches for designating the affected source: the entire taconite iron ore processing plant, groups of emission points, and individual emission points. In selecting the affected sources for regulation, we identified each HAP-emitting operation, the HAP emitted, and the quantity of HAP emissions from individual or groups of emissions points. We determined that establishing the entire plant as the affected source does not take into account differences in the quantity and types of HAP emitted by different processing operations. We also determined that establishing each individual emission point as the affected source does not take advantage of similarities among certain processing operations. We concluded that the most appropriate approach is to designate the group of emission points associated with each major process area as an affected source. The resulting affected sources are ore crushing and handling operations, each indurating furnace, finished pellet handling operations, and each ore dryer.

As previously mentioned, the term affected source is used primarily as a means of specifying what equipment or activities would be affected by the proposed standards. In addition, the term affected source serves to define where new source MACT applies. Specifically, the General Provisions of 40 CFR part 63 define the terms ''construction'' and ''reconstruction'' with reference to the term affected source and provide that new source MACT applies when construction and reconstruction occur. When establishing the affected sources for these proposed standards, we recognized that selecting a narrow definition of affected source (*e.g.*, each crusher, conveyor, and bin) would cause new source MACT requirements to be triggered more frequently than if the affected source were defined as a collection of equipment (*e.g.*, all ore crushing and handling emission units). We do not believe that the replacement of an individual emission unit that is part of a larger integrated process should trigger new source MACT. Therefore, we established affected sources for ore crushing and handling and finished pellet handling that represent collections of equipment, rather than individual units.

During the development of the affected source definitions, we considered combining the two affected sources into one due to similarities in emission characteristics and controls. However, we decided not to do so due to differences in the physical location and organization of the units. Specifically, ore crushing handling units are located upstream of the indurating furnace, and the finished pellet handling units are located downstream of the indurating furnace. As a result, the grouping of units that comprised the affected sources are typically located in different buildings at different parts of the plant. In addition, ore crushing handling units are organized with respect to the crushing lines, whereas finished pellet handling units are organized with respect to the indurating furnace lines.

The ore crushing and handling affected source consists of the collection of equipment and operations needed to produce crushed ore suitable for processing into green pellets. Emission units include ore crushers (primary, secondary, and tertiary), screens, conveyors, storage bins, and transfer points. The ore crushing and handling affected source begins where crude taconite iron ore is dumped into the primary crusher and ends where the unfired (green) pellets enter the indurating furnace. We grouped all of these emission units into the one affected source based on their functional relationship, the similarity of their HAP emission characteristics, and the considerations for new source MACT stated above. The only HAP emitted from these units are metallic HAP, primarily manganese. We compared the outlet PM concentrations for the different types of emission units (*i.e.*, crushers, conveyors, bins, screens, and transfer points) and crushing stage (primary, secondary, and tertiary) and observed no discernable difference in emissions. In addition, grouping all the ore crushing and handling emission units into one affected source will allow sources more flexibility in developing control strategies for achieving compliance.

All wet process operations, including wet milling, magnetic separation, hydraulic separation, chemical flotation, and concentrate thickening in the concentrator area, and vacuum disk filters and balling drums in the pelletizing area, are excluded from the rule because the water effectively suppresses all emissions from these operations. Operations associated with the handling of limestone/dolomite and bentonite are also excluded since they produce no HAP emissions.

The finished pellet handling affected source consists of the following emission units: conveyors, storage bins, screens, and transfer points. The finished pellet handling affected source begins at the indurating furnace discharge and ends where the finished pellets are stockpiled. We grouped all of these emission units into the finished pellet handling affected source based on the similarity of their HAP emission characteristics and process equipment type. The only HAP emitted by these units are metallic HAP, primarily manganese. We compared the outlet PM concentrations for the different types of emission units (*i.e.*, conveyors, bins, screens, and transfer points) and observed no discernable difference in emissions. Therefore, we do not believe that subcategorization of the finished pellet handling affected source is warranted.

Unlike the ore crushing and handling and finished pellet handling affected sources, we have selected a narrower definition of affected source for indurating furnaces by defining the affected source as each individual furnace, rather than the collection of indurating furnaces at a particular plant. We defined each indurating furnace as a separate affected source because furnaces are independent emission units. As independent emission units, each indurating furnace has it own dedicated emission controls. In contrast, emissions from several ore crushing and handling and finished pellet handling process units are often combined and vented to a shared control device. In addition, since the indurating furnaces are the most significant source of HAP emissions, we wanted all new indurating furnaces to be subject to new source MACT.

The indurating furnace affected source includes any furnace, including both straight grate and grate kiln designs, in which green pellets are hardened by firing to a high temperature of between 2,200 to 2,500 °F. The indurating furnace begins at the point where the grate feed conveyor discharges green pellets onto the furnace traveling grate and ends where the hardened pellets exit the finished pellet cooler. Unlike ore crushing and handling and finished pellet handling units, indurating furnaces are combustion sources, and as such, emit substantially more HAP. In addition to emitting metallic HAP, indurating furnaces emit acid gases (HCl and HF) and products of incomplete combustion (primarily formaldehyde).

We are establishing subcategories within the indurating furnace affected source to distinguish between the two types of furnace designs—grate kiln and straight grate. We have determined that grate kiln furnaces are higher emitting sources than straight grate furnaces due to physical and operational differences that affect emissions and the controllability of emissions.

First, the grate kiln furnaces are larger than straight grate units with annual production rates approximately 30 percent higher than that of the straight grate furnaces. Second, the grate kiln furnaces are composed of two furnace sections, a continuous grate followed by a rotary kiln, while the straight grate furnaces include only a continuous grate.

In the grate kiln, the pellets drop off a conveyor into the kiln and then tumble in the kiln as it rotates. As a result, there is substantially more disturbance of the pellets in the grate kiln furnace which contributes to an increase in pellet breakage and in the entrainment of particles in the air stream and causing higher PM loadings and HAP emissions. In addition, the average volume of air flowing through a grate kiln furnace is more than twice the average volume of air flowing through a straight grate furnace. The greater air flow in grate kilns causes more entrainment of particles in the air stream, causing higher exhaust gas PM loadings and HAP emissions. Available test data show that, when processing magnetite ore, PM loadings for grate kilns are twice that of straight grate furnaces. Because grate kiln furnaces and straight grate furnaces have unique physical and operational differences that affect emissions and the controllability of emissions, we have subcategorized based on furnace type.

We have also concluded that, within the grate kiln furnace subcategory, higher PM emissions are observed when hematite ore is processed rather than magnetite ore. For example, PM emissions for one furnace were measured at 0.004 gr/dscf when the furnace was processing magnetite. When the same furnace was processing hematite, the PM emissions were measured at 0.018 gr/dscf. Contributing factors to the higher emissions include the fact that the hematite ore pellets are finer grained and subject to a higher breakage rate. As a result of the higher inlet PM loading, the controlled outlet PM emissions are higher when processing hematite than when processing magnetite. Therefore, to account for this difference in emissions, we are making a distinction on the basis of ore type within grate kilns. There are only two grate kiln furnaces that process hematite. Both of these indurating furnaces are located at the same plant in Michigan. These furnaces process hematite approximately eight months of the year and process magnetite the remainder of the year. There are no straight grate indurating furnaces processing hematite.

Emissions from cooler vent stacks are excluded from the indurating furnace affected source based on the large size of the particles and the relatively low concentration of particulate emissions. Test data indicate that PM emissions from cooler vent stacks are primarily coarse PM with 80 percent of the PM larger than 50 microns and only less than 1 percent smaller than 10 microns. Uncontrolled PM emissions from cooler vent stacks are typically around 0.04 gr/dscf. Cooler vent stacks are currently not controlled at any of the existing taconite plants. In Minnesota, cooler vent stacks are subject to the State's requirements that limit the PM concentrations based on volumetric flow rate. Based on typical volumetric flow rates in cooler vent stacks, the Industrial Process Equipment Rule (IPER) limit values range from 0.04 to 0.05 gr/dscf. In Michigan, cooler vent stacks are not recognized as emission points and are not addressed in operating permits.

Similar to the indurating furnace affected source, we have selected a narrow definition of affected source for ore dryers by defining the affected source as each individual ore dryer, rather than the collection of ore dryers at a particular plant. We defined each ore dryer as a separate affected source because ore dryers are independent emission units with their own dedicated emission control devices. There are only two ore dryers, and both are located at the same plant in Michigan. The concentrate from the Michigan plant contains a higher percentage of fine particles than other taconite operations and, therefore, requires additional drying. The ore dryers are located just upstream of the balling drum. Both dryers are rotary designs that tumble the wet taconite ore concentrate through a heated air stream to reduce the amount of entrained moisture in the taconite ore concentrate.

B. How Did We Select the Pollutants?

Pollutants emitted by plants in the taconite iron ore processing source category include metallic HAP (primarily naturally occurring compounds of manganese, arsenic, lead, nickel, and chromium, and lesser quantities of mercury), organic HAP resulting from incomplete combustion (mainly formaldehyde), and acid gases (hydrochloric acid and hydrofluoric acid).

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 and which potentially could be present). When released, each of the metallic HAP compounds, except elemental mercury, behave as 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.

Products of incomplete combustion, such as formaldehyde, are released from indurating furnaces at very low concentrations as a result of the burning of fuels, such as natural gas. Formaldehyde has been measured through stack testing at concentrations that are typically less than 1 ppm.

Formaldehyde emissions are currently uncontrolled. Existing PM emission controls on indurating furnaces include ESP and wet scrubbers, neither of which are capable of controlling formaldehyde. In addition, since formaldehyde emissions are produced as a byproduct of burning fuels, generally natural gas, taconite plants cannot lower their formaldehyde emissions by switching raw materials or changing fuels.

We know of no feasible 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, down to eventually less than 10 percent at exhaust gas temperature of 300°F or less, which is typical of most indurating furnaces. Accordingly, the burning of large quantities of additional fuel, such as natural gas, would be needed to heat the exhaust gases to the desired temperature, which would generate additional quantities of carbon dioxide (a global warming gas) and nitrogen oxides (an ozone precursor). In addition, given the large volume of exhaust gas to be treated, on the order of several hundred thousand cubic feet per minute per furnace, and the complexity of retrofitting multiple stacks with gas burners and thermal catalytic oxidation units, the capital cost and operating cost for control would be enormous.

Since formaldehyde emissions are currently uncontrolled, we conclude that the MACT floor for formaldehyde is no emissions reduction. In addition, due to the severe technical and economic constraints of controlling formaldehyde at high volumetric flow rates, very low concentrations and relatively low temperatures, we conclude that no beyond-the-floor control is feasible. Accordingly, specific emission limitations for formaldehyde are not included in the proposed rule.

Acid gases (hydrochloric acid and hydrofluoric acid) are also emitted from indurating furnaces at very low concentrations, typically less than 3 ppm. Acid gases are formed in the indurating furnace due to the presence of chlorides and fluorides in pellet additives, such as dolomite and limestone. The taconite industry has not installed equipment to specifically control acid gases. The MACT floor for acid gases was determined to be no emissions reduction. Unlike formaldehyde, some air pollution control devices currently used by the industry to reduce PM emissions can achieve incidental control of acid gases. Due to the strong affinity of these acid gases for water, control equipment that use water, such as wet wall electrostatic precipitators and wet scrubbers, have the capability of reducing hydrochloric acid and hydrofluoric acid emissions substantially. Therefore, a specific emission limitation for acid gases is not included in today's proposal.

Indurating furnaces are also a source of mercury emissions. Mercury is a naturally occurring element in the taconite ore. As the taconite pellets are heated in the furnace, the naturally occurring mercury compounds are volatilized. The key factor affecting emissions is the mercury content of the ore. Currently, none of the plants in this industry have installed controls for mercury emissions. We also have not been able to identify any currently employed operating practices which effectively reduce mercury emissions. Since specific controls for mercury are not currently present in the industry and operating practices which effectively reduce mercury emissions have not been identified, the MACT floor for mercury was determined to be no emissions reduction. In evaluating potential above-the-floor options, we were unable to identify any viable control technologies or operating practices for achieving reductions in mercury emissions from indurating furnaces at taconite iron ore plants. As a result, a specific emission limitation for mercury has not been included in the proposed rule. We will reevaluate the feasibility of controlling mercury emissions from taconite iron ore plants as part of the assessment for residual risk standards.

Due to the nature of the taconite iron ore deposits on the Mesabi Range in Northeast Minnesota, there is some potential for the occurrence of contaminant asbestos in some taconite ore mining areas. Asbestos is the name applied to a group of six different minerals that occur naturally in the environment. These minerals are made up of long thin fibers similar to fiberglass. The concern is mainly limited to two taconite plants located at the eastern end of the Mesabi Range where acicular (needle-like) minerals may be present in the ore.

Asbestos emissions are currently regulated under NESHAP promulgated in April 1984 (40 CFR part 61, subpart M) that regulate the milling of commercial asbestos and the manufacturing and fabricating of asbestos products. The provisions of the NESHAP also apply to the demolition and renovation of buildings where asbestos-containing material is present. The NESHAP do not apply to ore or other mineral processing operations that may contain asbestos as a contaminant. A work group within 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. That study was initiated in response to the events surrounding exposures of citizens to asbestos which occurred as a contaminant in a vermiculite mine in Libby, Montana. The work group has developed an action plan which identifies steps necessary to gather the information that EPA needs to decide whether regulations for sources of contaminant asbestos are warranted. The work group has targeted vermiculite mining and processing operations as the first priority in the study. The work group also plans to study asbestos that occurs as a contaminant from other mining and processing operations, including taconite ore mining and processing. Decisions on whether to regulate asbestos that occurs as a contaminant in taconite ore mining and processing and other potential industries will be based on information gathered in the study.

C. How Did We Determine the Bases and Levels of the Proposed Standards?

We have taken alternative approaches to establishing the MACT floor, depending on the type, quality, and applicability of available data. The three approaches most commonly used involve reliance on the following: State and Federal regulations or permit limits, source test data that characterize actual emissions, and use of a technology floor with an accompanying demonstrated achievable emission level that accounts for process and/or air pollution control device variability. We evaluated each of these MACT floor approaches when developing the MACT floor for each of the four affected sources: Ore crushing and handling, indurating furnaces, finished pellet handling, and ore dryers. As previously discussed in this preamble, we are establishing standards for total PM as a surrogate pollutant for individual metallic HAP compounds.

1. Ore Crushing and Handling and Finished Pellet Handling

Although ore crushing handling and finished pellet handling are defined as separate affected sources, we combined the available test data on both sources for the MACT floor and MACT analyses. This is consistent with our usual practice in developing MACT standards in organizing, as appropriate, the available information for similar HAP-emitting equipment into related groups for the purpose of determining MACT floors and MACT; yet, as appropriate, maintaining separate affected source definitions for the purpose of defining the applicability of relevant standards.

We identified 264 emission units within the ore crushing and handling affected source and 82 emission units within the finished pellet handling affected source at the eight taconite plants (346 emission units total). Particulate matter emissions from both operations are controlled primarily with medium energy wet scrubbers (*i.e.*, venturi-rod scrubbers, impingement scrubbers, and marble bed scrubbers). Baghouses, low energy wet scrubbers (*i.e.*, rotoclones), multiclones, and ESP are also used.

Relative to State and Federal regulations and permit conditions, some of the ore crushing and handling and finished pellet handling emission units in Minnesota are subject to the new source performance standards (NSPS) for metallic mineral processing plants (40 CFR part 60, subpart LL). The NSPS limit PM emissions from each affected emission unit to 0.022 gr/dscf. However, most of the ore crushing and handling and finished pellet handling emission units in Minnesota are subject to the IPER. The Minnesota IPER establishes PM concentration emission limits as a function of volumetric flow. The emission limit becomes more stringent as volumetric flow increases. Particulate matter emission limits for ore crushing and handling and finished pellet handling units under the IPER range from approximately 0.030 gr/dscf to approximately 0.095 gr/dscf. Due to its proximity to Lake Superior, one of the Minnesota plants is subject to the following more stringent limits: 0.002 gr/dscf for tertiary crushing and some storage/transfer points, 0.010 gr/dscf for cobbing and some storage/transfer points, and 0.030 gr/dscf for the rest of the emission points. The two taconite plants in Michigan are subject to a State PM emission limit of 0.1 pounds of PM per 1,000 pounds of exhaust gas, which equates to 0.052 gr/dscf.

The PM emissions tests data used in the MACT analysis covers 60 emission units, which accounts for 17 percent of the combined 346 ore crushing and handling and finished pellet handling emission units in the source category. Included are representative data on all crushing stages, screening operations, conveyor transfer points, and storage bins, as well as finished pellet screening operations and conveyor transfer points. These tests also cover the full range of control devices applied to both emission units. Each test is composed of three, 1-hour test runs expressed in PM concentration units of gr/dscf.

We compared these 60 data points on actual emissions to the State and Federal emissions limitations to determine whether the limitations provided a reasonably realistic representation of actual emissions and performance. Based on this comparison, it is clear that actual PM emissions are considerably lower than the levels allowed by the State emission limits and the metallic mineral processing NSPS, and that the State and Federal PM emission limits do not realistically represent performance achieved in practice by the best performing sources. Test results in the data pool are on the order of 0.002 to 0.010 gr/dscf, which is substantially below that generally allowed under the State and Federal emissions limitations cited above.

We evaluated the test data by process stage (*i.e.*, primary crushing, secondary crushing, tertiary crushing, grate feed, and finished pellet handling) to determine whether PM emissions varied depending on process stage. We found no discernable differences in the types of controls or the level of controlled PM emissions among the various process stages. Consequently, we concluded that distinguishing among process stages was unnecessary, and that it was feasible to establish one PM emission limit that would apply to all ore crushing and handling and finished pellet handling emission units.

An underlying presumption when setting MACT standards is that all emission limitations must be met or complied with at all times. Consequently, when establishing MACT floors and ultimately MACT standards, we must consider the long-term variability in performance expected to occur under reasonable worst-case conditions or circumstances. We must assure that ensuing standards reflect the level of emissions control determined to be MACT. We must also assure that the standards are achievable under normal and recurring worst-case circumstances.

The MACT floor and the MACT level of control were determined based on each plant's flow-weighted mean PM concentration for all emission units in both affected sources. By averaging higher emitting units with lower emitting units, each plant's flow-weighted mean PM concentration value takes into account much of the variability in emissions among different units within the two affected sources and provides what we believe to be a reasonably accurate representation of the overall level of control that is being achieved by those affected sources.

We then proceeded to establish the MACT floor based on the pool of credible data available to us for each plant. Of the eight existing taconite iron ore plants, three plants were excluded from the floor analysis due to a lack of sufficient test data. One of the plants had no PM emissions test data whatsoever, and the other two plants had only two tested units each. Each of the remaining five plants had emissions test data for 6 to 21 units.

The first step in the MACT floor analysis was to calculate a flow-weighted mean PM concentration value (in gr/dscf) for each of the five plants using the available PM emissions data for the ore crushing and handling and finished pellet handling units at each plant. For each unit with a PM emissions test, the total grains of PM emitted during the test was calculated by multiplying the test average in gr/dscf by the test average flow rate in dscf. Then, for each plant, the grains of PM emitted by all the tested units at that plant were totaled. The total grains emitted were then divided by the total air flow for the tested units (in dscf) to obtain the flow-weighted mean PM concentration in gr/dscf. The flow-weighted mean PM concentration values (in gr/dscf) for each of the five plants were 0.0047, 0.0050, 0.0059, 0.0114 and 0.0116. The resulting MACT floor for the ore crushing and handling and finished pellet handling affected sources as determined using the flow-weighted mean PM concentration for the five plants is 0.008 gr/dscf.

We then examined a beyond-the-floor alternative. The next increment of control beyond the floor is the installation of impingement scrubbers capable of meeting a concentration limit of 0.005 gr/dscf, which is equivalent to the level of control we anticipate requiring for new sources. We estimate the additional capital cost of replacing existing controls with new impingement scrubbers performing at a level of 0.005 gr/dscf to be $3.5 million and the total annual cost to be $653,000 per year. We estimate the corresponding incremental reduction in HAP metals achieved by reducing the PM concentration from 0.008 to 0.005 gr/dscf to be 0.37 tons. The cost per ton of HAP is $1.7 million. The energy increase would be expected to be 2,870 mega-watt hours per year, primarily due to the energy requirements of new scrubbers. We believe that the high cost, coupled with the small reduction in HAP emissions, does not justify this beyond-the-floor alternative at this time. We could not identify any other beyond-the-floor alternatives. Consequently, we chose the floor level of control of 0.008 gr/dscf as MACT.

For new ore crushing and handling and new finished pellet handling affected sources, we are selecting a PM outlet concentration of 0.005 gr/dscf as new source MACT. The 0.005 gr/dscf level corresponds to the best performing source (plant) with the lowest flow-weighted mean PM concentration.

2. Indurating Furnaces Processing Magnetite

There are 21 indurating furnaces at the eight operating taconite plants. Fourteen of the furnaces are grate kiln designs and seven are straight grate designs. As discussed previously in this preamble, we are establishing subcategories within the indurating furnace affected source to accommodate differences in the two furnace designs. We have determined that these furnace design types have unique physical and operational differences which warrant their separation into two subcategories. We are also differentiating the grate kiln furnaces based on type of ore processed (*i.e.*, hematite versus magnetite ore).

We evaluated the existing State PM emission limitations as an option for establishing the MACT floor. However, a comparison of the State limits with data on actual PM emissions shows that the State limits are generally much more lenient than the actual emissions and, as such, are not appropriate for establishing the MACT floor.

Most of the indurating furnaces in Minnesota are subject to the State's IPER. Particulate matter emission limits for indurating furnaces under the IPER range from 0.025 to 0.05 gr/dscf. Due to its proximity to Lake Superior, one of the Minnesota plants, which operates straight grate furnaces, is subject to a more stringent State limit of 0.01 gr/dscf. The two Michigan plants, both of which operate grate kiln furnaces, are subject to State PM emission limits also based on air flow rates. One plant which operates two furnaces has a PM emission limit of 0.065 pounds of PM per 1,000 pounds of exhaust gas, which equates to 0.04 gr/dscf. The other plant which operates four grate kilns has a PM emission limit of 0.10 pounds of PM per 1,000 pounds of exhaust gas for two larger kilns, and 0.15 pounds of PM per 1,000 pounds of exhaust gas for two smaller kilns. The two emission limits equate to 0.06 to 0.09 gr/dscf, respectively. By contrast, the available information on actual PM emissions for 19 of 21 furnaces for which we have emissions test data indicate that the actual emissions are considerably lower than the levels allowed under the State limits. The average concentration of actual emissions measured from all 19 furnaces when processing magnetite range from 0.005 to 0.02 gr/dscf, which is about 5 times lower than the typical State limit. Therefore, we concluded that the State PM emission limits and permit conditions do not realistically represent the emission levels actually achieved in practice by the best performing sources.

We next examined the available emissions data to determine if the MACT floor could be based on actual emissions. We have credible PM test data for six of the seven straight grate furnaces and thirteen of the fourteen grate kiln furnaces. The test data for each furnace consists of a test for each furnace stack, with multiple tests for furnaces that discharge through more than one stack. Each test consists of three 1-hour test runs expressed in gr/dscf. For the furnaces with multiple stacks, the PM emissions from each indurating furnace were calculated as the flow-weighted mean concentration of PM emissions from all stacks. Given the amount and quality of available PM emissions test data, we conclude that the available information on actual emissions is more than adequate for the purpose of determining the requisite MACT floors for new and existing sources.

As a first step in our MACT floor and MACT analysis for indurating furnaces, we initially explored the appropriateness of using a plantwide average approach similar to that used for ore crushing and handling and finished pellet handling. After an assessment of the available test data, we determined that the plantwide average approach was not feasible due to insufficient data, and that an alternative approach that focuses on individual furnace emissions rather than plantwide emissions is more suitable. For plants using grate kiln furnaces, we have sufficient test data to calculate a plantwide value for only three of the five plants. For plants using straight grate furnaces, we have sufficient test data to calculate a plantwide value for only two of the three plants. Therefore, due to a lack of test data on some furnaces, it is not possible to use a plantwide approach to determine the MACT floor for indurating furnaces.

As an alternative approach, we treated each of the 21 indurating furnaces as separate emission units. As a first step, we looked at all furnaces (straight grate and grate kiln) with multiple PM emissions tests to account for the variability inherent in the performance tests. There are 12 grate kiln furnaces and three straight grate furnaces for which there were two or more emissions tests. To quantify the variability between tests for each of these furnaces, we calculated a relative standard deviation (RSD) for each furnace. The RSD is calculated by dividing the standard deviation of the data by the mean of the data and multiplying the result by 100. The RSD provides a measure of the variability of the PM test data for each furnace relative to the mean of the PM test data for each furnace. The RSD is expressed as a percentage for each furnace, and these percentages were then compared between furnaces.

The variability between tests for a given indurating furnace is due to normal variability in process operation and control device performance, as well as measurement error. These factors affect all furnaces similarly, and their affect on emissions is largely independent of furnace type and ore type. Therefore, we looked at the range of RSD values for all furnaces together (grate kilns and straight grates) when determining the overall variability. The RSD for the 15 furnaces with multiple test data ranged from 9 to 112 percent and averaged 37 percent. This indicates that on average, the PM emissions tests for each furnace are within plus or minus 37 percent of the mean of the emissions tests.

We then applied the average RSD of 37 percent to each emission test to include a measure of variability to each test. Next, we assigned a level of performance to each of the 19 furnaces for which we have actual emissions data. For furnaces for which we have two or more tests, we chose the higher of the test results as the representative value of performance for that furnace. We believe that selecting the higher of the test results provides more assurance that the inherent operational variability is fully accounted for in the selection of the representative value. For furnaces for which we have only one test, we used that single test result as the assigned value of performance.

Since there are fewer than 30 sources in the straight grate and grate kiln indurating furnace subcategories, the MACT floors were determined using the best five performing sources. Each indurating furnace was then ranked within its subcategory according to its flow-weighted mean concentration of PM emissions after application of the RSD adjustment for variability. The five furnaces in each subcategory with the lowest adjusted PM concentration were identified as the best performing sources. The MACT floor was then determined as the mean PM concentration value for the five best performing sources. The adjusted PM concentration values for the five best performing straight grate furnaces were 0.0083, 0.0090, 0.0093, 0.0105, and 0.0126. The mean of the five best performing straight grate furnaces was determined to be 0.010 gr/dscf. The adjusted PM concentration values for the five best performing grate kiln furnaces were 0.0085, 0.0090, 0.0111, 0.0123, and 0.0123. The mean of the five best performing grate kiln furnaces was determined to be 0.011 gr/dscf.

We then examined a 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 concentration limit of 0.006 gr/dscf, which is equivalent to the level of control required for new straight grate furnaces and new grate kiln furnaces. For straight grate furnaces, we estimate the additional capital cost of going from a level of 0.010 gr/dscf to a level of 0.006 gr/dscf to be $71.2 million and the total annual cost to be $11.4 million per year. We estimate the corresponding additional reduction in HAP achieved from straight grate furnaces to be 30 tons. The cost per ton of HAP for straight grate furnaces is $379,000/ton. The energy increase would be expected to be 17,139 mega-watt hours per year, primarily due to the energy requirements of new wet scrubbers and dry ESP. For grate kiln furnaces, we estimate the additional capital cost of going from a level of 0.011 gr/dscf to a level of 0.006 gr/dscf to be $28.5 million and the total annual cost to be $5.3 million per year. We estimate the corresponding additional reduction in HAP achieved from grate kilns to be 12.8 tons. The cost per ton of HAP for grate kiln furnaces is $414,000/ton. The energy increase would be expected to be 36,297 mega-watt hours per year, primarily due to the energy requirements of new wet scrubbers and dry ESP. We believe that the high cost, coupled with the small reduction in HAP emissions, does not justify this beyond-the-floor alternative for either furnace subcategory. We could not identify any other beyond-the-floor alternatives. Consequently, we chose the MACT floor levels of control of 0.010 gr/dscf for straight grate furnaces and 0.011 gr/dscf for grate kiln furnaces as MACT for existing indurating furnace.

For the new source MACT analysis, we did not adjust the PM emissions test results for variability. We believe that a variability adjustment is not necessary because new emission controls can be engineered to account for variability in process operation and control device performance, as well as measurement error. We ranked the representative PM concentrations for each straight grate furnace and for each grate kiln furnace from the lowest to the highest values.

We selected the furnace with the lowest PM outlet concentration of 0.006 gr/dscf as new source MACT for new straight grate indurating furnaces. We believe that this furnace, which is controlled by a venturi scrubber, represents the best controlled similar source among the seven operating straight grate furnaces.

We selected the furnace with the lowest PM outlet concentration of 0.006 gr/dscf as the new source MACT for new grate kiln indurating furnaces processing magnetite. We believe that this furnace, which is controlled by a dry ESP, represents the best controlled similar source among the 14 operating grate kiln furnaces.

3. Indurating Furnaces Processing Hematite

There are two indurating furnaces that process hematite ore. Both furnaces are grate kiln designs and are located at the same plant in Michigan. Hematite is processed approximately 8 months of the year and magnetite is processed the remainder of the year.

Both furnaces are similar in design, size, operating conditions and air pollution control. Each furnace is of the grate kiln design, which consists of a continuous traveling grate followed by a rotary kiln. The two kilns are both 25 feet in diameter and 160 feet long and have similar production rates. Exhaust gases from each furnace are controlled by three ESP, three dry units on one furnace and one wet and two dry units on the other furnace. All corresponding ESP for each furnace have similar configurations, including number of chambers and fields, and collection area; and similar operating conditions, including volumetric air flow, gas inlet temperature, primary and secondary currents, and primary and secondary voltages.

We evaluated the existing State PM emission limitations as an option for establishing the MACT floor. However, a comparison of the State limit with data on actual PM emissions shows that the State limit is much more lenient than the actual emissions and, as such, is not appropriate for establishing the MACT floor.

Both furnaces are subject to Michigan's PM emission limit of 0.065 pounds of particulate per 1,000 pounds of exhaust gas, which equates to approximately 0.04 gr/dscf. In comparison, available information on actual PM emissions for the two furnaces indicate that the actual emissions are considerably lower than the levels allowed under the State limit. The average concentration of actual emissions measured from the two furnaces when processing hematite range from 0.017 to 0.018 gr/dscf, which is about half the State limit. Therefore, we concluded that the State PM emission limit does not realistically represent the emission levels actually achieved in practice by the two furnaces when processing hematite.

We next examined the available emissions data to determine if the MACT floor could be based on actual emissions. We have credible PM test data for both furnaces while processing hematite. The test data for each furnace consists of a PM test of each furnace stack (three tests per furnace). Each test consists of three 1-hour test runs. The PM emissions from each furnace were calculated as the flow-weighted mean concentration of PM emissions in gr/dscf from all stacks. We believe that this available information on actual emissions is adequate for the purpose of determining the requisite MACT floors for new and existing sources.

A variability analysis for furnaces processing hematite could not be conducted because multiple valid PM emissions tests are not available for these furnaces. As a result, we relied on the RSD adjustment used when processing magnetite to account for process, control device, and measurement variability. As noted previously, these factors affect all furnaces similarly, and their affect on emissions is largely independent of furnace type and ore type. Therefore, we believe it is appropriate to apply the RSD calculated for furnaces processing magnetite to furnaces processing hematite. Since there are only two indurating furnaces processing hematite, and these furnaces are ostensibly identical in design, size, operation and emissions control, we selected the MACT floor based on the higher of the two PM concentration values (0.023 and 0.025 gr/dscf) after application of the RSD adjustment for variability. The resulting MACT floor for existing grate kiln indurating furnaces processing hematite is 0.025 gr/dscf.

We then examined a beyond-the-floor alternative. The next increment of control beyond the floor is the installation of a dry ESP capable of consistently meeting a concentration limit of 0.018 gr/dscf, which is equivalent to the level of control required for new grate kiln furnaces processing hematite. We estimate the additional capital cost of going from a level of 0.025 gr/dscf to a level of 0.018 gr/dscf to be $25.9 million and the total annual cost to be $4.9 million per year. We estimate the corresponding additional reduction in HAP achieved from grate kiln furnaces processing hematite to be 0.3 tons. The cost per ton of HAP for grate kiln furnaces processing hematite is $19.6 million/

ton. The energy increase would be expected to be 34,898 mega-watt hours per year, primarily due to the energy requirements of new dry ESP. We believe that the high cost, coupled with the small reduction in HAP emissions, does not justify this beyond-the-floor alternative at this time. We could not identify any other beyond-the-floor alternatives. Consequently, we chose the MACT floor level of control of 0.025 gr/dscf as MACT for existing grate kiln furnaces processing hematite.

For the new source MACT analysis, we relied on the same emission source test data used above in the existing source MACT determination. However, we did not adjust the values from the emissions tests with a RSD adjustment for the new source MACT analysis. We believe that a variability adjustment is not necessary because new emission controls can be engineered to account for variability in process operation and control device performance.

As noted previously, both furnaces are ostensibly identical in design, operation and control, with measured PM emissions based on one performance test per furnace of 0.017 and 0.018 gr/dscf. Given the similarities between the two furnaces and their demonstrated performance, we selected a PM concentration of 0.018 gr/dscf as the new source MACT for new grate kiln indurating furnaces when processing hematite.

4. Ore Dryers

There are only two ore dryers in the source category. Both are rotary designs and are located at the same plant in Michigan. The first dryer measures 10 feet in diameter and 80 feet in length and has a rated capacity of 400 tons per hour. It is equipped with two cyclones and an impingement scrubber in series for PM control. The second dryer is somewhat larger measuring 12.5 feet in diameter and 100 feet in length with a rated capacity of 650 tons per hour. The exhaust gas from the second dryer is split into two streams, with each exhaust stream controlled by two cyclones and an impingement scrubber in series and discharging through a separate stack. Both ore dryers are subject to Michigan's PM emission limit of 0.1 pound of particulate per 1,000 pounds of exhaust gas, which equates to approximately 0.052 gr/dscf.

We have one PM emission test for each dryer. Both dryers were tested in May 2002 while processing hematite. Tests were conducted at each of the three dryer stacks and included three 1-hour test runs per stack. In the case of the two stack dryer, the test results were calculated on a flow-weighted basis. The results, expressed in units of PM concentration, are 0.017 and 0.040 gr/dscf for the smaller and larger dryer, respectively.

We examined the test conditions under which each dryer was tested and have determined that the smaller dryer was tested under conditions not representative of normal long-term operations. Specifically, the dryer had been idle prior to testing and brought back on-line solely for the purpose of testing only 2 hours ahead of commencing the performance test, which was 3 hours in duration. We do not believe that a warm-up period of only a few hours is adequate to produce conditions representative of the worst-case circumstance reasonably expected to occur under normal long-term operations. We have, therefore, excluded these data from further consideration in our MACT assessment.

We evaluated the existing State PM emission limit as an option for establishing the MACT floor. A comparison of the State limit of 0.052 gr/dscf with the only credible data on actual PM emissions of 0.040 gr/dscf indicates that the State limit is a reasonable proxy of actual performance and, as such, is appropriate for establishing the MACT floor level. Consequently, the MACT floor for ore dryers is determined to be the level of control indicated by the existing State limit of 0.052 gr/dscf.

We then examined a beyond-the-floor alternative. The next increment of control beyond the floor is the installation of venturi scrubbers capable of meeting a concentration limit of 0.025 gr/dscf, which is equivalent to the level of control required for new ore dryers. We estimate the additional capital cost of going from a level of 0.052 gr/dscf to a level of 0.025 gr/dscf to be $98,000 and the total annual cost to be $256,000 per year. We estimate the corresponding additional reductions in HAP achieved from ore dryers to be 0.32 tons. The cost per ton of HAP for ore dryers is $790,000/ton. The energy increase would be expected to be 3,520 mega-watt hours per year, primarily due to the energy requirements of new wet scrubbers. We believe that the high cost, coupled with the small reduction in HAP emissions, does not justify this beyond-the-floor alternative at this time. We could not identify any other beyond the floor alternatives. Consequently, we chose the MACT floor level of control of 0.052 gr/dscf as MACT for existing ore dryers.

For new ore dryers, we are selecting a PM outlet concentration of 0.025 gr/dscf as new source MACT. The 0.025 gr/dscf level corresponds to the standard for dryers in the NSPS for calciners and dryers in mineral industries (40 CFR part 60, subpart UUU). The dryers used to develop the NSPS limit are very similar to the dryers that are used by the taconite industry. Specifically, many of the dryers studied in the NSPS were of the rotary design, were controlled by wet scrubbers, and processed material with a particle size distribution similar to that of taconite ore. Therefore, due to these similarities, we believe that the level of 0.025 gr/dscf from the NSPS for calciners and dryers in mineral industries is a reasonable proxy of the performance that can be achieved by new ore dryers in the taconite industry.

D. How Did We Select the Initial Compliance Requirements?

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. For both affected sources, emission units must demonstrate their performance through initial testing. The performance test is to be conducted using EPA Method 5 or 17 in 40 CFR part 60, appendix A.

Factors that can affect the compatibility of the Method 5 and Method 17 results are stack temperature, moisture and the type and quantity of condensible material. Stack emissions from ore crushing and handling and finished pellet handling emission units are typically at ambient temperature, and are low in moisture and condensible material. Therefore, under the conditions encountered at taconite plants for both units, we consider the results from Method 5 and Method 17 to be equivalent.

There are a total of 346 ore crushing and handling and finished pellet handling emission units in the industry. Combined, these units account for only 1 percent of the total HAP emitted from the entire source category. Requiring an initial EPA Method 5 or 17 PM test for all 346 units would cost approximately $1.73 million ($5,000 per test). The ore crushing and handling and finished pellet handling operations at most taconite iron ore processing plants consist of parallel lines of crushers, screens, bins, and conveyors. In most cases, the parallel lines consist of nearly identical process units and emission control equipment. Therefore, to reduce the burden of initial testing, we are allowing plants to group similar emission units with similar control equipment together and then conduct an initial performance test on one or more representative emission units within each group, depending on the number of similar units within the group. To ensure consistency in the grouping of similar emission units, the rule includes the following criteria: emission units must be the same type of process unit (*e.g.*, primary crushers are separate from secondary crushers); emissions from the units must be controlled by the same type of emission control device (*e.g.*, impingement scrubbers are separate from venturi scrubbers); the difference in the volumetric flow rate among similar emission units in dscf cannot vary by more than 10 percent; and the difference in the actual process throughput rate among similar emission units in long tons per hour cannot vary by more than 10 percent. 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 and identify the representative unit that will be tested for each group.

By allowing similar emission units to be grouped together, we estimate that the total number of emission units subjected to initial compliance testing would be reduced from 346 to 176 units. This would reduce the initial compliance burden by approximately half to $880,000.

Even after grouping similar emission units, most plants would still have to test between 20 and 39 units (ore crushing and handling and finished pellet handling combined). We believe that 180 days does not allow sufficient time to schedule and test this number of emission units. In addition, plants will be conducting initial compliance tests for their indurating furnaces at the same time. Therefore, to further reduce the burden of initial compliance testing for both emission units, we are allowing plants 2 years following the compliance date to conduct all initial compliance tests for both emission units. We believe that by grouping similar units and allowing initial testing to be conducted within 2 years, the initial compliance burden will be minimized while still providing adequate assurance of initial compliance with the emission limits.

To demonstrate initial compliance with the PM emission limit for indurating furnaces, the flow-weighted mean concentration of PM emissions of all furnace stacks for each furnace must not exceed the applicable PM emission limit. Indurating furnaces must demonstrate their performance through initial testing. The performance test is to be conducted using EPA Method 5 or 17 in 40 CFR part 60, appendix A.

As mentioned above, factors that can affect the compatibility of the Method 5 and Method 17 results are stack temperature, moisture and the type and quantity of condensible material. Stack emissions from indurating furnaces typically range from 200 to 315°F, with an 8 to 14 percent moisture content, and low concentrations of condensible material. Under these conditions we consider the results from Method 5 and Method 17 to be equivalent. However, if the stack temperature is above 320°F and the furnace is burning a fuel other than natural gas, Method 5 must be used for the performance test.

The initial compliance test for each indurating furnace must be performed within 180 calendar days of the compliance date. For indurating furnaces with multiple stacks, all stacks for the indurating furnace must be tested simultaneously. The 180-day requirement is consistent with the requirements in subpart A of 40 CFR part 63. The number of indurating furnaces per plant ranges from one to five, as well as the number of stacks per furnace. Based on the relatively small number of indurating furnaces, we believe that 180 days allows sufficient time for plants to complete initial testing of all indurating furnaces.

To demonstrate initial compliance with the PM emission limit for ore dryers, the flow-weighted mean concentration of PM emissions of all stacks for each dryer must not exceed the applicable PM emission limit. Ore dryers must demonstrate their performance through initial testing. The performance test is to be conducted using EPA Method 5 or 17 in 40 CFR part 60, appendix A.

The initial compliance test for each ore dryer must be performed within 180 calendar days of the compliance date. For ore dryers with multiple stacks, all stacks for the ore dryer must be tested simultaneously. The 180-day requirement is consistent with the requirements in subpart A of 40 CFR part 63. There are only two existing ore dryers in the source category. As such, we conclude that 180 days allows sufficient time to complete initial testing.

The proposed rule would also require that certain operating limits on control devices be established during the initial compliance test to ensure that control devices operate properly on a continuing basis. All operating limits must be established during a performance test that demonstrates compliance with the applicable emission limit. During the initial compliance tests, operating limits must be established for pressure drop and scrubber water flow rate for all wet scrubbers, and opacity (using a COMS) for dry ESP.

E. How Did We Select the Continuous Compliance Requirements?

For continuous compliance, we chose periodic performance testing for PM, which is consistent with current permit requirements. We consulted with the two States in which taconite ore processing plants are located to determine how they were implementing title V permitting requirements for performance tests. The requirements for the frequency and number of performance tests for ore crushing and handling, and finished pellet handling and ore drying units were determined to be variable and highly site-specific. Consequently, for ore crushing and handling, and finished pellet handling and ore drying units, we decided that the schedule for conducting subsequent performance tests should be based on schedules established in each plant's title V operating permit. If a title V permit has not been issued, then the plant must submit a testing plan and schedule to the permitting authority for approval.

For each indurating furnace, the proposed rule would require subsequent testing of all stacks based on the schedule in each plant's title V operating permit, but no less frequent than twice per 5-year permit term. If a title V permit has not been issued, then the plant must submit a testing plan and schedule to the permitting authority for approval. The testing frequency in the testing plan can be no less frequent than twice per 5-year period. Since the majority of the HAP emissions from this source category result from the operation of indurating furnaces, we believe that testing twice per permit term is appropriate.

We also developed procedures to ensure that control equipment are operating properly on a continuous basis. Baghouses must be equipped with a bag leak detection system. Wet scrubbers must be monitored for pressure drop and scrubber water flow rate, and they must not fall below the parametric monitoring limits established during the performance test. Dry electrostatic precipitators must be monitored for opacity using COMS. The opacity must not exceed the operating limit established during the performance test. If a plant uses equipment other than a baghouse, scrubber, or dry ESP to control emissions from an affected source, the owner or operator is required to send us a monitoring plan containing information on the type of device, performance test results, appropriate operating parameters to be monitored, operating limits, and operation and maintenance.

F. How Did We Select the Notification, Recordkeeping, and Reporting Requirements?

We selected the notification, recordkeeping, and reporting requirements that are consistent with the NESHAP General Provisions (40 CFR part 63, subpart A). One-time notifications are required by the EPA to identify which plants are subject to the standards, if a plant has complied with the rule requirements, and when certain events such as performance tests and performance evaluations are scheduled. Semiannual compliance reports containing information on any deviation from rule requirements are also required. These reports would include information on any deviation that occurred during the reporting period; if no deviation occurred, only summary information (such as a statement of compliance) is required. Consistent with the General Provisions, we also require an immediate report of any startup, shutdown, or malfunction where the actions taken in response were not consistent with the startup, shutdown, and malfunction plan. This information is necessary to determine if changes to the plan are required. Recordkeeping requirements are limited to those records that are required to document compliance with the proposed rule. Recordkeeping requirements include: a copy of each notification and report submitted and all supporting documentation; records of startup, shutdown, and malfunction; records of performance tests, performance evaluations, and opacity observations; and records related to control device performance. These notifications, reports, and records are the minimum required to ensure initial and continuous compliance with the proposed rule.

IV. Summary of Environmental, Energy, and Economic Impacts

The environmental, energy, and economic impacts of the proposed 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 proposed rule. We estimated no 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 four plants will install new impingement scrubbers on a total of 54 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 7 of the 47 indurating furnace stacks. We estimate that the existing controls will be upgraded with new components on 4 of the 47 indurating furnace stacks. We anticipate that three plants will install new impingement scrubbers on a total of 11 out of the 82 finished pellet handling 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 proposed standards are expected to reduce HAP emissions by a total of 370 tons/year, a reduction of about 40 percent. Metallic HAP emissions will be reduced by 14 tons/year (a 40 percent reduction) and acid gas emissions (HCl and HF) will be reduced by 356 tons/year (a 54 percent reduction). In addition, the proposed standards are expected to reduce PM emissions by 9,438 tons/year, a reduction of about 65 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 $47.3 million. Total annualized costs are estimated at $7.0 million/yr, which includes $4.1 million/yr in capital recovery costs, $2.8 million/yr in emission control device operation and maintenance costs, and $0.1 million/yr for monitoring, recordkeeping and reporting. These costs are based on the installation of new wet scrubbers on 54 ore crushing and handling units, seven indurating furnace stacks, and 11 finished pellet handling units. The costs are also based on upgrading four wet scrubbers for one indurating furnace. In addition, the estimate includes the cost of bag leak detection systems for baghouses, continuous parameter monitoring systems for scrubbers, and continuous opacity monitors for ESP.

C. What Are the Economic Impacts?

We prepared an economic analysis to evaluate the impact this proposed rule would 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 proposed rule is $7 million (in 2000 dollars). 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 proposed 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 $3.4 million of the total social costs, merchant producers incur $0.7 million in costs, and integrated iron and steel producers incur $5 million in costs. The EAF producers and foreign producers enjoy a net gain in revenues of $1.2 million and $0.7 million, respectively.

Our analysis indicates that the taconite iron ore market will experience minimal changes in the price and quantity of 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 2/100th of a percent while production may decrease by less than 1/100th of 1 percent. The price of steel mill products is projected to increase by less than 1/100th of 1 percent and the quantity produced is projected to change by less than 1/100th of 1 percent. The EAF steel producers who make steel from scrap rather than iron ore are projected to increase their output by approximately 2/100th 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 this proposed 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 27 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 proposed 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 2000, a period of time during in which the entire nation experienced a drop in economic activity. Three of the companies owning taconite plants have filed for protection under Chapter 11 of the bankruptcy code since September 2001. Thus, there is reason to be concerned about the financial condition of companies owning taconite plants. The incremental effect of the proposed 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 proposed rule. All the taconite production plants are located within four counties in Minnesota and one in Michigan. Thus, the impacts of the proposed 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 proposed 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 proposed rule will add approximately $4 million in economic cost to the region. This represents approximately 2/10ths 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.

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

We project that the implementation of the rule as proposed would increase water usage by 8.4 billion gallons per year industrywide. This increased water usage would 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 would be expected to be 15,298 megawatt-hours per year, primarily due to the energy requirements of new wet scrubbers.

V. Solicitation of Comments and Public Participation

We seek full public participation in arriving at final decisions and encourage comments on all aspects of this proposal from all interested parties. You need to submit full supporting data and detailed analysis with your comments to allow use to make the best use of them. Be sure to direct your comments to the EPA Docket Center (Air Docket), Docket ID No. OAR–2002–0039 (see **ADDRESSES**).

VI. Administrative Requirements

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.

Pursuant to the terms of Executive Order 12866, it has been determined that this regulatory action is not a ''significant regulatory action'' because none of the listed criteria apply to this action. Consequently, this action was not submitted to OMB for review under Executive Order 12866.

B. Executive Order 13132, Federalism

Executive Order 13132, entitled ''Federalism'' (64 FR 43255, August 10, 1999), requires the 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 rules 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.''

This proposed rule 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. This proposed rule is mandated by statute and, does not impose requirements on States, however, States will be required to implement the rule by incorporating the rule into permits and enforcing the rule upon delegation. States will collect permit fees that will be used to offset the resource burden of implementing the rule. Thus, the requirements of section 6 of the Executive Order do not apply to this rule. Although section 6 of Executive Order 13132 does not apply to this rule, the EPA did consult with State and local officials in developing this rule.

C. Executive Order 13175, Consultation and Coordination With Indian Tribal Governments

Executive Order 13175, entitled ''Consultation and Coordination with Indian Tribal Governments'' (65 FR 67249, November 6, 2000), requires the 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.'' This proposed rule does not have tribal implications. No tribal governments own or operate taconite iron ore processing plants. Thus, Executive Order 13175 does not apply to this rule.

D. Executive Order 13045, Protection of Children From Environmental Health Risks 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 the EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, the EPA must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned rule 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 rule. This proposed rule is not subject to Executive Order 13045 because it is technology based and not based on health or safety risks. No children's risk analysis was performed because no alternative technologies exist that would provide greater stringency at a reasonable cost. Further, this proposed rule has been determined not to be ''economically significant'' as defined under Executive Order 12866.

E. Unfunded Mandates Reform Act of 1995

Title II of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104–4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, the EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with ''Federal mandates'' that may result in expenditures by State, local, and Tribal governments, in 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 the EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows the EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the final rule an explanation as to why that alternative was not adopted. Before the 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.

The EPA has determined that this proposed 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 to the private sector in any 1 year. The maximum total annual cost of this rule for any year has been estimated to be $8.9 million. Thus, today's proposed rule is not subject to the requirements of sections 202 and 205 of the UMRA. In addition, the EPA has determined that this proposed rule contains no regulatory requirements that might significantly or uniquely affect small governments because it contains no requirements that apply to such governments or impose obligations upon them. Therefore, today's proposed rule is not subject to the requirements of section 203 of the UMRA.

F. Regulatory Flexibility Act (RFA), As Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 SBREFA), 5 U.S.C. et seq.

The RFA generally requires an agency to prepare a regulatory flexibility analysis of any rule subject to notice and comment rulemaking requirements under the Administrative Procedure Act or any other statute unless the agency certifies that the rule will not have a significant economic impact on a substantial number of small entities. Small entities include small businesses, small organizations, and small governmental jurisdictions.

For purposes of assessing the impacts of today's proposed rule on small entities, ''small entity'' is defined as: (1) A small business whose parent company has fewer than 500 employees (the size standard set by the Small Business Administration for small businesses in NAICS 21221, Taconite Iron Ore Processing Facilities); (2) a small governmental jurisdiction that is a government or 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.

Since there are no small entities within the taconite industry, this proposed rule is not expected to impose regulatory costs on any small entities. Therefore, EPA certifies that this action will not have a significant economic impact on a substantial number of small entities.

G. Paperwork Reduction Act

The information collection requirements in this proposed rule have been submitted for approval to OMB under the Paperwork Reduction Act, 44 U.S.C. 3501 *et seq.* The EPA has prepared an Information Collection Request (ICR) document (ICR No. 2050.01), and you may obtain a copy from Susan Auby by mail at U.S. EPA, Office of Environmental Information, Collection Strategies Division, U.S. EPA (2822T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460, by e-mail at *auby.susan@epa.gov,* or by calling (202) 566–1672. You may also download a copy off the Internet at *http://www.epa.gov/icr.* The information requirements are not effective 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 114 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 EPA's policies set forth in 40 CFR part 2, subpart B.

The proposed rule would require applicable one-time notifications required by the General Provisions for each affected source. As required by the NESHAP General Provisions, all plants would be required to prepare and operate by a startup, shutdown, and malfunction plan. Plants also would be required to prepare an operation and maintenance plan for control devices subject to operating limits, a fugitive emissions control plan, and a performance testing plan. Records would be 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 would 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 startup, shutdown, and malfunction plan. If no deviation or other event occurred, only a summary report would be 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. Since the rule provides a 3-year compliance period, periodic reporting, initial performance testing, and subsequent performance testing activities would be conducted beyond the 3-year period covered by the ICR. Therefore, the burden for these items is not included in the burden estimate.

The annual public reporting and recordkeeping burden for this collection of information (averaged over the first 3 years after the effective date of the final rule) is estimated to total 518 labor hours per year at a total annual cost of $29,052, including labor, capital, and operation and maintenance. This burden estimate includes the preparation of a startup, shutdown, and malfunction plan, an operating and maintenance plan, a fugitive dust emission control plan, and a performance testing plan. The total capital/startup costs associated with the monitoring requirements over the 3-year period of the ICR are estimated at $3.2 million (annualized capital/startup costs are $271,089/year) with operating and maintenance equipment costs of $101,455 per year.

Burden means the total time, effort, or financial resources expended by persons to generate, maintain, retain, or disclose or provide information to or for a Federal agency. This includes the time needed to review instructions; develop, acquire, install, and utilize technology and systems for the 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 be able to respond to a collection of information; search existing 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 rules are listed in 40 CFR part 9 and 48 CFR chapter 15.

Comments are requested on the EPA's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden, including through the use of automated collection techniques. By U.S. Postal Service, send comments on the ICR to the Director, Collection Strategies Division, U.S. EPA (2822T), 1200 Pennsylvania Avenue, NW., Washington, DC 20460; or by courier, send comments on the ICR to the Director, Collection Strategies Division, U.S. EPA (2822T), 1301 Constitution Avenue, NW., Room 6143, Washington DC 20460 (202–566–1700); and to the Office of Information and Regulatory Affairs, Office of Management and Budget, 725 17th Street, NW., Washington, DC 20503, marked "Attention: Desk Officer for EPA." Include the ICR number in any correspondence. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after December 18, 2002, a comment to OMB is best assured of having its full effect if OMB receives it by January 17, 2003. The final rule will respond to any OMB or public comments on the information collection requirements contained in this proposal.

H. National Technology Transfer and Advancement Act

Section 12(d) of the National Technology Transfer and Advancement Act (NTTAA) of 1995 (Pub. L. 104–113; 15 U.S.C. 272 note) directs the 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.

This proposed rule involves technical standards. The EPA cites the following standards in this proposed 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. The search and review results have been documented and are placed in the docket (Docket Number A–2001–14) for this proposed rule.

The voluntary consensus standard ASME PTC 19–10–1981–Part 10, "Flue and Exhaust Gas Analyses," is cited in this 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.

This 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 this proposed rule were impractical alternatives to EPA test methods for the purposes of this proposed 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 this proposed 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 the EPA testing methods included in the proposed 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 of the EPA testing methods, performance specifications, or procedures.

I. Executive Order 13211, Energy Effects

This rule is not subject to Executive Order 13211, Actions Concerning Rules That Significantly Affect Energy Supply, Distribution, or Use" (66 FR 28355, May 22, 2001) because it is not a significant regulatory action under Executive Order 12866.

List of Subjects in 40 CFR Part 63

Environmental protection, Administrative practice and procedure, Air pollution control, Hazardous substances, Intergovernmental relations, Reporting and recordkeeping requirements.

Dated: November 26, 2002.

Christine Todd Whitman,

Administrator.

For the reasons stated in the preamble, title 40, chapter I, part 63 of the Code of Federal Regulations is proposed to be 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 proposed to be amended by adding subpart RRRRR to read as follows:

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

What This Subpart Covers

Emission Limitations and Work Practice Standards

Operation and Maintenance Requirements

General Compliance Requirements

Initial Compliance Requirements

Continuous Compliance Requirements

Notifications, Reports, and Records

Other Requirements and Information

Tables to Subpart RRRRR of Part 63

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

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 [DATE 3 YEARS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**].

(b) If you have a new affected source and its initial startup date is on or before [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**].

(c) If you have a new affected source and its initial startup date is after [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], 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 it 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 of this subpart that applies to you.

(b) You must meet each operating limit for control devices in paragraphs (b) (1) through (4) of this section that applies to you.

(1) For each negative pressure baghouse or positive pressure baghouse equipped with a stack applied to meet any particulate matter emission limit in Table 1 of this subpart, you must operate the baghouse such that the bag leak detection system does not alarm for more than 5 percent of the total operating time in any semiannual reporting period.

(2) For each scrubber applied to meet any particulate matter emission limit in Table 1 of this subpart, you must maintain the average pressure drop and scrubber water flow rate 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 of this subpart, you must maintain the 6-minute average opacity of emissions exiting the control device stack at or below the level established during the initial performance test.

(4) An owner or operator who uses an air pollution control device other than a baghouse, scrubber, or dry electrostatic precipitator must submit a site specific monitoring plan as described in § 63.9631(d).

§ 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 or delegated authority 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 part 70 or 71 of this chapter.

(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 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 operate at all times according to a written operation and maintenance plan for each control device subject to an operating limit in § 63.9590(b). Each plan must be submitted to the Administrator or delegated authority on or before the compliance date that is specified in § 63.9583 and must address the elements in paragraphs (b) (1) and (2) of this section. You must maintain a current copy of the operation and maintenance plan onsite and 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) 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) In the event a bag leak detection system alarm is triggered for a baghouse, 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. 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) Shutting down the process producing the particulate emissions.

General Compliance Requirements

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

(a) You must be in compliance with the emission limitations, work practice standards, and operation and maintenance requirements in this subpart at all times, except during periods of startup, shutdown, and malfunction. The terms startup, shutdown, and malfunction are defined in § 63.2.

(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.

(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) To demonstrate initial compliance with the emission limits in Table 1 of this subpart for ore crushing and handling, you must conduct 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) The initial performance tests must be conducted within 2 years of the

compliance date that is specified in § 63.9583.

(b) To demonstrate initial compliance with the emission limits in Table 1 of this subpart for each indurating furnace, you must conduct an initial performance test for all stacks associated with an indurating furnace within 180 calendar days of the compliance date that is specified in § 63.9583. For indurating furnaces with multiple stacks, all stacks for the indurating furnace must be tested simultaneously.

(c) To demonstrate initial compliance with the emission limits in Table 1 of this subpart for finished pellet handling, you must conduct 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) The initial performance tests must be conducted within 2 years of the compliance date that is specified in § 63.9583.

(d) To demonstrate initial compliance with the emission limits in Table 1 of this subpart for each ore dryer, you must conduct an initial performance test for all stacks associated with an ore dryer within 180 calendar days of the compliance date that is specified in § 63.9583. For ore dryers with multiple stacks, all stacks for the ore dryer must be tested simultaneously.

(e) For ore crushing and handling and finished pellet handling, in lieu of conducting initial performance tests for particulate matter on all stacks, you may elect to group similar emission units together and conduct an initial compliance test on a representative sample of emission units 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. The number of units that must be tested within each group of similar units must be determined using the criteria in paragraph (g) of this section. If you decide to test representative emission units, you must prepare and submit a testing plan as described in paragraph (h) 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 (4) of this section.

(1) The emission units must be of the same type, which may include, but is not limited to, 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.

(2) The emission units must have the same type of air pollution control device, which may include, but is not limited to, venturi scrubbers, impingement scrubbers, rotoclones, multiclones, wet and dry electrostatic precipitators, and baghouses.

(3) The volumetric air flow rates discharged from the air pollution control devices, in dry standard cubic feet (dscf), must be within plus or minus 10 percent of the representative unit.

(4) The actual process throughput rate, in long tons per hour, must be within plus or minus 10 percent of the representative unit.

(g) If you elect to test representative emission units as provided in paragraph (e) of this section, the number of emission units tested within each group of similar units must be based on the criteria in paragraphs (g) (1) through (3) of this section.

(1) For each group of similar units with six or less units, you must test at least one unit.

(2) For each group of similar units with greater than six, but equal to or less than 12 units, you must test at least two units.

(3) For each group of similar units with greater than 12 units, you must test at least four units.

(h) If you are conducting initial testing on representative emission units within the ore crushing and handling or finished pellet handling, you must submit a testing plan for initial performance tests as required under paragraph (e) of this section. This testing plan must be submitted to the Administrator or delegated authority on or before the compliance date that is specified in § 63.9583. The testing plan must contain the information specified in paragraphs (h) (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(s) that will be the representative unit(s) for that group, and subject to initial performance testing.

(2) The process type, type of emission control, the air flow rate in dscf, and the actual process throughput rate in long tons per hour for each emission unit.

(3) A schedule indicating when you will conduct initial performance tests for particulate matter for each of the representative units.

(i) 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.

(j) If you commenced construction or reconstruction between December 18, 2002, and [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], you must demonstrate initial compliance with either the proposed emission limit or the promulgated emission limit no later than [DATE 180 CALENDAR DAYS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**] or no later than 180 calendar days after startup of the source, whichever is later, according to § 63.7(a)(2)(ix).

(k) If you commenced construction or reconstruction between December 18, 2002, and [DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], 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 [DATE 3 YEARS AND 180 CALENDAR DAYS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE **FEDERAL REGISTER**], 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 and continuous 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 the conditions detailed in paragraphs (b) and (c) of this section.

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

(1) Determine the concentration of particulate matter in the stack gas and the stack gas volumetric flow rate 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) Collect a minimum sample volume of 60 dry standard cubic feet of gas during each particulate matter test run. Three valid test runs are needed to comprise a performance test.

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

(i) Compute the flow-weighted mean concentration of particulate matter emissions using Equation 1 of this section.

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

Where:

C_w = Flow-weighted mean concentration of particulate matter for all emission units within the affected source, grains per dry standard cubic foot (gr/dscf);

C_i = Three-run average particulate matter concentration from emission unit ''i'', gr/dscf;

Q_i = Three-run average volumetric flow rate of stack gas from emission unit ''i'', dscf/hr; and

n = The number of emission units in the affected source.

(ii) If you are grouping similar units as allowed under § 63.9620(d), you must meet the requirements in paragraphs (b)(3)(ii) (A) and (B) of this section.

(A) All emission units within each group of similar units must be assigned the flow-weighted mean concentration of particulate matter emissions for the representative unit.

(B) All emission units within each group of similar units must be assigned the actual average operating volumetric flow rate of exhaust gas measured for each emission unit within each group of similar units. You cannot assign the average volumetric flow rate of exhaust gas measured for a representative unit to all emission units within each group of similar units.

(c) To determine compliance with the applicable emission limit for particular matter in Table 1 of this subpart for each ore dryer and for each indurating furnace, you must follow the test methods and procedures in paragraphs (c) (1) through (5) of this section.

(1) Determine the concentration of particulate matter for each stack according to the test methods in appendix A to part 60 of this chapter. 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) Collect a minimum sample volume of 60 dry standard cubic feet of gas during each particulate matter test run. Three valid test runs are needed to comprise a performance test.

(3) For ore dryers and indurating furnaces with multiple stacks, all stacks must be tested simultaneously.

(4) For each ore dryer and each indurating furnace, compute the flow-weighted mean concentration of particulate matter for each test run 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 run ''a'', gr/dscf;

C_i = Concentration of particulate matter from stack ''i'' for run ''a'', gr/dscf;

Q_i = Volumetric flow rate of stack gas from stack ''i'' for run ''a'', dscf/hr;

n = Number of stacks; and

a = Run number: 1, 2, or 3.

(5) For each ore dryer and each indurating furnace, compute the flow-weighted mean particulate matter concentration for the three test runs using Equation 3 of this section.

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

Where:

C = Flow-weighted mean particulate matter concentration, gr/dscf;

C_1 = Flow-weighted particulate matter concentration for run 1, gr/dscf;

C_2 = Flow-weighted particulate matter concentration for run 2, gr/dscf; and

C_3 = Flow-weighted particulate matter concentration for run 3, gr/dscf.

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

(a) For a wet scrubber subject to operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(2), you must establish site-specific operating limits according to the procedures in paragraphs (a) (1) and (2) of this section.

(1) Using the continuous parameter monitoring system (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) Compute and record the average pressure drop and scrubber water flow rate for each individual test run. Your operating limits are the lowest average pressure drop and scrubber water flow rate value in any of the three runs that meet the applicable emission limit.

(b) For a dry electrostatic precipitator subject to the operating limit in § 63.9590(b)(3) for opacity, you must establish a site-specific operating limit according to the procedures in paragraphs (b) (1) and (4) of this section.

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

(2) 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.

(3) 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.

(4) In your semiannual compliance report required by 63.9641(b), report as a deviation any 6-minute period during which the average opacity, as measured by the COMS, exceeds the opacity value corresponding to the 99 percent upper confidence level determined under paragraph (b)(3) of this section.

(c) You may change the operating limits for a wet scrubber, or dry electrostatic precipitator if you meet the requirements in paragraphs (c) (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 of this subpart.

(3) Establish revised operating limits according to the applicable procedures n paragraphs (a) and (b) 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 of this subpart, you must demonstrate initial compliance by meeting the requirements in paragraphs (a) (1) through (6) 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 of 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 of 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 of 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 of this subpart.

(5) For each wet scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(2), you must meet the requirements in paragraphs (a)(5) (i) and (ii) of this section.

(i) Measure and record the pressure drop and scrubber water flow rate during the performance test in accordance with § 63.9622(a).

(ii) Establish appropriate site-specific operating limits.

(6) For each dry electrostatic precipitator subject to the opacity operating limit in § 63.9590(b)(3), you must meet the requirements in paragraphs (a)(6)(i) and (ii) of this section.

(i) Measure and record the opacity during the performance test in accordance with § 63.9622(b).

(ii) Establish an appropriate site-specific operating limit.

(b) For each emission limitation 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?

(a) You must demonstrate initial compliance with the work practice standards by meeting the requirements in paragraphs (a)(1) through (3) of this section.

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

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

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

(b) [Reserved]

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

You must demonstrate initial compliance by certifying in your notification of compliance status that you have met the requirements in paragraphs (a) through (c) of this section.

(a) You have prepared the operation and maintenance plan according to the requirements in § 63.9600(b).

(b) You operate each control device according to the procedures in the operation and maintenance plan.

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

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 limit in Table 1 of 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 from indurating furnaces to demonstrate continued compliance with the indurating furnace limits in Table 1 of 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, all stacks for the indurating furnace must be tested simultaneously.

(c) You must conduct subsequent performance tests to demonstrate compliance with the finished pellet handling emission limit in Table 1 of 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 from ore dryers to demonstrate continued compliance with the ore dryer limits in Table 1 of 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, all stacks for the ore dryer must be tested simultaneously.

(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 or delegated authority 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 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 subject to the operating limit in § 63.9590(b)(1) for the bag leak detection system alarm, you must at all times monitor the relative change in particulate matter loadings using a bag leak detection system 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 identified in the manual.

(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 for 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 inspection 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 laying on their sides. You do not have to make this check for shaker-type baghouses using 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) For each wet scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(2), you must at all times monitor the average pressure drop and water flow rate using a CPMS according to the requirements in § 63.9632(b) and (c).

(c) For each dry electrostatic precipitator subject to the opacity operating limit in § 63.9590(b)(3), you must at all times monitor the 6-minute average opacity of emissions exiting each control device stack using a COMS according to the requirements in § 63.9632(d).

(d) An owner or operator who uses an air pollution control device other than a baghouse, scrubber, or dry electrostatic precipitator must submit a site specific monitoring plan that includes the information in paragraphs (d) (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 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); and

(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 baghouse subject to the operating limit in § 63.9590(b)(1) for the bag leak detection system alarm, you must install, operate, and maintain each bag leak detection system according to the requirements in paragraphs (a) (1) through (7) 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 a preset level. The alarm must be located such that it can be heard by the appropriate plant personnel.

(4) Each system that works based on the triboelectric effect must be installed, operated, and maintained in a manner consistent with the guidance document, ''Fabric Filter Bag Leak Detection Guidance,'' EPA–454/R–98–015, September 1997. 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 may install, operate, and maintain other types of bag leak detection systems in a manner consistent with the manufacturer's written specifications and recommendations.

(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.

(6) Following the initial adjustment, do not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as detailed in your operation and maintenance plan. Do not increase the sensitivity by more than 100 percent or decrease the sensitivity by more than 50 percent over a 365-day period unless a responsible official certifies, in writing, that the baghouse has been inspected and found to be in good operating condition.

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

(b) For each wet scrubber subject to the operating limits in § 63.9590(b)(2) for pressure drop and scrubber water flow rate, you must install, operate, and maintain each CPMS according to the requirements in paragraphs (b)(1) and (2) of this section.

(1) For the pressure drop CPMS, you must follow the procedures in paragraphs (b)(1)(i) through (vi) of this section.

(i) Locate the pressure sensor(s) in or as close to a position that provides a representative measurement of the pressure and that minimizes or eliminates pulsating pressure, vibration, and internal and external corrosion.

(ii) Use a gauge with a minimum measurement sensitivity of 0.5 inch of water or a transducer with a minimum measurement sensitivity of 5 percent of the pressure range.

(iii) Check the pressure tap for pluggage daily.

(iv) Using a manometer, check gauge calibration quarterly and transducer calibration monthly.

(v) Conduct calibration checks any time the sensor exceeds the manufacturer's specified maximum operating pressure range, or install a new pressure sensor.

(vi) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(2) For the scrubber water flow rate CPMS, you must follow the procedures in paragraphs (b)(2) (i) through (iv) of this section.

(i) Locate the flow sensor and other necessary equipment in a position that provides a representative flow and that reduces swirling flow or abnormal velocity distributions due to upstream and downstream disturbances.

(ii) Use a flow sensor with a minimum measurement sensitivity of 5 percent of the flow rate.

(iii) Conduct a flow sensor calibration check at least semiannually according to the manufacturer's instructions.

(iv) At least monthly, inspect all components for integrity, all electrical connections for continuity, and all mechanical connections for leakage.

(c) You must install, operate, and maintain each CPMS for a wet scrubber according to the requirements in paragraphs (c) (1) through (3) of this section.

(1) Each CPMS must complete a minimum of one cycle of operation for each successive 5-minute period.

(2) Each CPMS must have valid data for at least 95 percent of every averaging period.

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

(d) For each dry electrostatic precipitator subject to the opacity operating limit in § 63.9590(b)(3), you must install, operate, and maintain each COMS according to the requirements in paragraphs (d) (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. 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 collected 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 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 of 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 and for finished pellet handling, you must demonstrate continuous compliance by meeting the requirements in paragraphs (b)(1) and (2) 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 of 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.

(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 of 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 subject to the operating limit for the bag leak detection system alarm in § 63.9590(b)(1), you must demonstrate continuous compliance by completing the requirements in paragraphs (d) (1) through (3) of this section.

(1) Maintaining each baghouse such that the bag leak detection system alarm does not sound for more than 5 percent of the operating time during any semiannual reporting period. To determine the percent of time the alarm sounded you must follow the procedure in paragraphs (d)(1) (i) through (v) of this section.

(i) Alarms that occur due solely to a malfunction of the bag leak detection system are not included in the calculation.

(ii) Alarms that occur during startup, shutdown, or malfunction are not included in the calculation if the condition is described in the startup, shutdown, and malfunction plan and all the actions you took during the startup, shutdown, or malfunction were consistent with the procedures in the startup, shutdown, and malfunction plan.

(iii) Count 1 hour of alarm time for each alarm when you initiated procedures to determine the cause of the alarm within 1 hour.

(iv) Count the actual amount of time you took to initiate procedures to determine the cause of the alarm if you did not initiate procedures to determine the cause of the alarm within 1 hour of the alarm.

(v) Calculate the percentage of time the alarm on the bag leak detection system sounds as the ratio of the sum of alarm times to the total operating time multiplied by 100.

(2) Maintaining records of the times the bag leak detection system alarm sounded, and for each valid alarm, the time you initiated corrective action, the corrective action(s) taken, and the date on which corrective action was completed.

(3) 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 § 63.9632(a)(6), you must include a copy of the required written certification by a responsible official in the next semiannual compliance report.

(e) For each wet scrubber subject to the operating limits for pressure drop and scrubber water flow rate in § 63.9590(b)(2), you must demonstrate continuous compliance by completing the requirements of paragraphs (e)(1) through (3) of this section.

(1) Maintaining the average pressure drop and scrubber water flow rate at levels no lower than those established during the initial or subsequent performance test.

(2) Inspecting and maintaining each 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.

(f) For each dry electrostatic precipitator subject to the site-specific opacity operating limit in § 63.9590(b)(3), you must demonstrate continuous compliance by completing the requirements of paragraphs (f)(1) and (2) of this section.

(1) Maintaining the 6-minute average opacity of emissions no higher than the site-specific limit established during the initial or subsequent performance test.

(2) Operating and maintaining each COMS and reducing the COMS data according to § 63.9632(d).

§ 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 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) and (2) of this section.

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

(2) Initiating and completing corrective action for a bag leak detection system alarm according to § 63.9600(b)(2) 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 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 of this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. 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 according to 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.

(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 [DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**], you must submit your initial notification no later than [DATE 120 CALENDAR DAYS AFTER THE DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**].

(c) As specified in § 63.9(b)(3), if you start up your new affected source on or after [DATE OF PUBLICATION OF THE FINAL RULE IN THE **Federal Register**], 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 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 the CPMS was out-of-control during the reporting period.

(7) For each deviation from an emission limitation in Table 1 of 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, if applicable) 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 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 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.

§ 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, 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 1 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 United States Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. 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 U.S. 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 U.S. 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 (3) of this section.

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

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

(3) 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 tribroelectric, 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.

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.

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.

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 where 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

For . . .	You must comply with each of the following . . .
1. Existing ore crushing and handling emission units.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all ore crushing and handling emission units, as determined using the procedures in § 63.9621(b), must not exceed 0.008 grains per dry standard cubic foot (gr/dscf).
2. New ore crushing and handling emission units.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all ore crushing and handling emission units, as determined using the procedures in § 63.9621(b), must not exceed 0.005 gr/dscf.
3. Each existing straight grate indurating furnace processing magnetite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.010 gr/dscf.
4. Each new straight grate indurating furnace processing magnetite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.006 gr/dscf.
5. Each existing grate kiln indurating furnace processing magnetite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.011 gr/dscf.
6. Each new grate kiln indurating furnace processing magnetite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.006 gr/dscf.
7. Each existing grate kiln indurating furnace processing hematite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.025 gr/dscf.
8. Each new grate kiln indurating furnace processing hematite.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.018 gr/dscf.
9. Existing finished pellet handling emission units.	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all finished pellet handling emission units, as determined using the procedures in § 63.9621(b), must not exceed 0.008 gr/dscf.
10. New finished pellet handling emission units	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all finished pellet handling emission units, as determined using the procedures in § 63.9621(b), must not exceed 0.005 gr/dscf.
11. Each existing ore dryer	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 0.052 gr/dscf.
12. Each new ore dryer	The flow-weighted mean concentration of particulate matter discharged to the atmosphere from all stacks, as determined using the procedures in § 63.9621(c), must not exceed 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.	

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

Citation	Subject	Applies to Subpart RRRRR	Explanation
§ 63.5	Construction/Reconstruction	Yes.	
§ 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 § 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	

[FR Doc. 02–31231 Filed 12–17–02; 8:45 am]

BILLING CODE 6560–50–P