**ENVIRONMENTAL PROTECTION AGENCY**

**40 CFR Part 63**

**[EPA–HQ–OAR–2017–0664; FRL–9999–37–OAR]**

**RIN 2060–AT05**

# National Emission Standards for Hazardous Air Pollutants: Taconite Iron Ore Processing Residual Risk and Technology Review

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

**ACTION:** Proposed rule.

**SUMMARY:** This proposal presents the results of the U.S. Environmental Protection Agency's (EPA's) residual risk and technology reviews (RTRs) for the National Emission Standards for the Hazardous Air Pollutants (NESHAP) for Taconite Iron Ore Processing, as required under the Clean Air Act (CAA). Based on the results of the risk review, the EPA is proposing that risks from emissions of air toxics from this source category are acceptable and that the existing standards provide an ample margin of safety. Furthermore, under the technology review, the EPA identified no cost-effective developments in controls, practices, or processes to achieve further emissions reductions. Therefore, the EPA is proposing no revisions to the existing standards based on the RTRs. However, in this action the EPA is proposing: The removal of exemptions for periods of startup, shutdown, and malfunction (SSM) and clarifying that the emissions standards apply at all times; the addition of electronic reporting of performance test results and compliance reports; minor technical corrections and amendments to monitoring and testing requirements that would reduce the compliance burden on industry while continuing to be protective of the environment; and that regulation of a certain type compound emitted by one of the facilities, known as elongated mineral particulate, is not required under CAA section 112 because this compound is not a hazardous air pollutant (HAP) pursuant to the CAA. This action, if finalized, would result in improved monitoring, compliance, and implementation of the existing standards.

**DATES:** *Comments.* Comments must be received on or before November 12, 2019. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before October 25, 2019.

*Public hearing.* If anyone contacts us requesting a public hearing on or before September 30, 2019, we will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document and posted at *https://www.epa.gov/stationary-sources-air-pollution/taconite-iron-ore-processing-national-emission-standards-hazardous.* See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA–HQ–OAR–2017–0664, by any of the following methods:

- *Federal eRulemaking Portal: https://www.regulations.gov/* (our preferred method). Follow the online instructions for submitting comments.
- *Email: a-and-r-docket@epa.gov.* Include Docket ID No. EPA–HQ–OAR–2017–0664 in the subject line of the message.
- *Fax:* (202) 566–9744. Attention Docket ID No. EPA–HQ–OAR–2017–0664.
- *Mail:* U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA–HQ–OAR–2017–0664, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460.
- *Hand/Courier Delivery:* EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m.–4:30 p.m., Monday–Friday (except federal holidays).

*Instructions:* All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to *https://www.regulations.gov/,* including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document.

**FOR FURTHER INFORMATION CONTACT:** For questions about this proposed action, contact Mr. David Putney, Sector Policies and Programs Division (D243–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–2016; fax number: (919) 541–4991; and email address: *putney.david@epa.gov.* For specific information regarding the risk modeling methodology, contact Mr. Chris Sarsony, Health and Environmental Impacts Division (C539–02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–4843; fax number: (919) 541–0840; and email address: *sarsony.chris@epa.gov.* For questions about monitoring and testing requirements, contact Ms. Gerri Garwood, Sector Policies and Programs Division (D243–05), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–2406; fax number: (919) 541–4991; and email address: *Garwood.gerri@epa.gov.* For information about the applicability of the NESHAP to a particular entity, contact Mr. John Cox, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, WJC South Building (Mail Code 2227A), 1200 Pennsylvania Avenue NW, Washington DC 20460; telephone number: (202) 564–1395; and email address: *cox.john@epa.gov.*

**SUPPLEMENTARY INFORMATION:**

*Public hearing.* Please contact Ms. Adrian Gates at (919) 541–4860 or by email at *gates.adrian@epa.gov* to request a public hearing, to register to speak at the public hearing, or to inquire as to whether a public hearing will be held.

*Docket.* The EPA has established a docket for this rulemaking under Docket ID No. EPA–HQ–OAR–2017–0664. All documents in the docket are listed in *Regulations.gov.* Although listed, some information is not publicly available, *e.g.,* Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in *Regulations.gov* or in hard copy at the EPA Docket Center, Room 3334, WJC West Building, 1301 Constitution Avenue NW, Washington, DC. The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566–1744, and the telephone number for the EPA Docket Center is (202) 566–1742.

*Instructions.* Direct your comments to Docket ID No. EPA–HQ–OAR–2017–0664. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at *https://*

*www.regulations.gov/,* including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through *https://www.regulations.gov/* or email. This type of information should be submitted by mail as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets.*

The *https://www.regulations.gov/* website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through *https://www.regulations.gov/,* your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at *https://www.epa.gov/dockets.*

*Submitting CBI.* Do not submit information containing CBI to the EPA through *https://www.regulations.gov/* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, mark the outside of the digital storage media as CBI and then identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete version of the comments that includes information claimed as CBI, you must submit a copy of the comments that does not contain the information claimed as CBI directly to the public docket through the procedures outlined in Instructions above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404–02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA–HQ–OAR–2017–0664.

*Preamble acronyms and abbreviations.* We use multiple acronyms and terms in this preamble. While this list may not be exhaustive, to ease the reading of this preamble and for reference purposes, the EPA defines the following terms and acronyms here:

AEGL acute exposure guideline level
AERMOD air dispersion model used by the HEM–3 model
CAA Clean Air Act
CalEPA California EPA
CBI Confidential Business Information
CFR Code of Federal Regulations
D/F dioxins/furans
EMP elongated mineral particulate
EPA Environmental Protection Agency
ERPG emergency response planning guideline
ERT Electronic Reporting Tool
ESP electrostatic precipitator
HAP hazardous air pollutant(s)
HCl hydrochloric acid
HEM–3 Human Exposure Model, Version 1.5.5
HF hydrogen fluoride
HI hazard index
HQ hazard quotient
IRIS Integrated Risk Information System
km kilometer
MACT maximum achievable control technology
mg/m$^3$ milligrams per cubic meter
MIR maximum individual risk
NAAQS National Ambient Air Quality Standards
NEI National Emissions Inventory
NESHAP national emission standards for hazardous air pollutants
NTTAA National Technology Transfer and Advancement Act
OAQPS Office of Air Quality Planning and Standards
OMB Office of Management and Budget
PB–HAP hazardous air pollutants known to be persistent and bio-accumulative in the environment
pdf portable document format
PM particulate matter
POM polycyclic organic matter
REL reference exposure level
RFA Regulatory Flexibility Act
RfC reference concentration
RTR residual risk and technology review
SAB Science Advisory Board
SSM startup, shutdown, and malfunction
The Court the United States Court of Appeals for the District of Columbia Circuit
TOSHI target organ-specific hazard index
tpy tons per year
TRIM.FaTE Total Risk Integrated Methodology.Fate, Transport, and Ecological Exposure model
UF uncertainty factor
UMRA Unfunded Mandates Reform Act
URE unit risk estimate

*Organization of this document.* The information in this preamble is organized as follows:

## I. General Information

### *A. Does this action apply to me?*

Table 1 of this preamble lists the NESHAP and associated regulated industrial source category that is the subject of this proposal. Table 1 is not intended to be exhaustive, but rather provides a guide for readers regarding the entities that this proposed action is likely to affect. The proposed amendments, once promulgated, will be directly applicable to the affected sources. Federal, state, local, and tribal government entities would not be affected by this proposed action. As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List, Final Report* (*see* EPA–450/3–91–030, July 1992), the Taconite Iron Ore Processing source category includes any operation engaged in separating and concentrating iron ore from taconite, a low grade iron ore to produce taconite pellets. The category includes, but is not limited to, the following processes: Liberation of the iron ore by wet or dry crushing and grinding in gyratory crushers, cone crushers, rod mills, and ball mills; concentration of the iron ore by magnetic separation or flotation; pelletization by wet tumbling with a balling drum or balling disc; induration using a straight grate or grate kiln furnace, and finished pellet handling.

TABLE 1—NESHAP AND INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS PROPOSED ACTION

| Source category | NESHAP | NAICS code [1] |
|---|---|---|
| Taconite Iron Ore Processing | 40 CFR part 63, subpart RRRRR | 21221 |

[1] North American Industry Classification System.

### *B. Where can I get a copy of this document and other related information?*

In addition to being available in the docket, an electronic copy of this action is available on the internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at *https://www.epa.gov/taconite-iron-ore-processing-national-emission-standards-hazardous.* Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal and key technical documents at this same website. Information on the overall RTR program is available at *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html.*

A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA–HQ–OAR–2017–0664).

## II. Background

### *A. What is the statutory authority for this action?*

The statutory authority for this action is provided by sections 112 and 301 of the CAA, as amended (42 U.S.C. 7401 *et seq.*). Section 112 of the CAA establishes a two-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards and the second stage involves evaluating those standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions. This second stage is commonly referred to as the ‘‘residual risk review.’’ In addition to the residual risk review, the CAA also requires the EPA to review standards set under CAA section 112 every 8 years to determine if there are ‘‘developments in practices, processes, or control technologies’’ that may be appropriate to incorporate into the standards. This review is commonly referred to as the ‘‘technology review.’’ When the two reviews are combined into a single rulemaking, it is commonly referred to as the ‘‘risk and technology review.’’ The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements. A more comprehensive discussion appears in the document titled *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology,* in the docket for this rulemaking.

In the first stage of the CAA section 112 standard setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different requirements for major source standards and area source standards. ‘‘Major sources’’ are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. All other sources are ‘‘area sources.’’ For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT ‘‘floor.’’ The EPA must also consider control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as beyond-the-floor standards. In certain instances, as provided in CAA section 112(h), the EPA may set work practice standards where it is not feasible to prescribe or enforce a numerical emission standard. For area sources, CAA section 112(d)(5) gives the EPA discretion to set standards based on generally available control technologies or management practices (GACT standards) in lieu of MACT standards.

The second stage in standard-setting focuses on identifying and addressing any remaining (*i.e.,* ‘‘residual’’) risk according to CAA section 112(f). For source categories subject to MACT standards, section 112(f)(2) of the CAA requires the EPA to determine whether promulgation of additional standards or revised standards is needed to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect. Section 112(d)(5) of the CAA provides that this residual risk review is not required for categories of area sources subject to GACT standards. Section 112(f)(2)(B) of the CAA further expressly preserves the EPA's use of the two-step approach for developing standards to address any residual risk and the Agency's interpretation of ''ample margin of safety'' developed in the *National Emissions Standards for Hazardous Air Pollutants: Benzene Emissions from Maleic Anhydride Plants, Ethylbenzene/Styrene Plants, Benzene Storage Vessels, Benzene Equipment Leaks, and Coke By-Product Recovery Plants* (Benzene NESHAP) (54 FR 38044, September 14, 1989). The EPA notified Congress in the Risk Report that the Agency intended to use the Benzene NESHAP approach in making CAA section 112(f) residual risk determinations (EPA–453/R–99–001, p. ES–11). The EPA subsequently adopted this approach in its residual risk determinations and the United States Court of Appeals for the District of Columbia Circuit (the Court) upheld the EPA's interpretation that CAA section 112(f)(2) incorporates the approach established in the Benzene NESHAP. See *NRDC* v. *EPA,* 529 F.3d 1077, 1083 (D.C. Cir. 2008).

The approach incorporated into the CAA and used by the EPA to evaluate residual risk and to develop standards under CAA section 112(f)(2) is a two-step approach. In the first step, the EPA determines whether risks are acceptable. This determination ''considers all health information, including risk estimation uncertainty, and includes a presumptive limit on maximum individual lifetime [cancer] risk (MIR)[1] of approximately 1 in 10 thousand.'' 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions standards necessary to reduce risk to an acceptable level without considering costs. In the second step of the approach, the EPA considers whether the emissions standards provide an ample margin of safety to protect public health ''in consideration of all health information, including the number of persons at risk levels higher than approximately 1 in 1 million, as well as other relevant factors, including costs and economic impacts, technological feasibility, and other factors relevant to each particular decision.'' *Id.* The EPA must promulgate emission standards necessary to provide an ample margin of safety to protect public health or determine that the standards being reviewed provide an ample margin of safety without any revisions. After conducting the ample margin of safety analysis, we consider whether a more stringent standard is necessary to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

CAA section 112(d)(6) separately requires the EPA to review standards promulgated under CAA section 112 and revise them ''as necessary (taking into account developments in practices, processes, and control technologies)'' no less often than every 8 years. In conducting this review, which we call the ''technology review,'' the EPA is not required to recalculate the MACT floor. *Natural Resources Defense Council (NRDC)* v. *EPA,* 529 F.3d 1077, 1084 (D.C. Cir. 2008). *Association of Battery Recyclers, Inc.* v. *EPA,* 716 F.3d 667 (D.C. Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

### *B. What is this source category and how does the current NESHAP regulate its HAP emissions?*

The EPA initially promulgated the Taconite Iron Ore Processing NESHAP on October 30, 2003 (68 FR 61869), and it is codified at 40 CFR part 63, subpart RRRRR. This NESHAP regulates HAP emissions from new and existing taconite iron ore processing plants that are major sources of HAP. The Taconite Iron Ore Processing source category consists of eight individual facilities. Six of these facilities are in Minnesota and two are in Michigan.

A taconite iron ore processing plant separates and concentrates iron ore from taconite, a low-grade iron ore containing 20- to 25-percent iron, and produces taconite pellets, which are 60- to 65-percent iron. Most of these pellets, nearly 98 percent, are sent to iron and steel manufacturers for use as feed material. The regulated sources are each new or existing ore crushing and handling operation, ore dryer, pellet indurating furnace, and finished pellet handling operation at a taconite iron ore processing plant that is (or is part of) a major source of HAP emissions. The NESHAP also regulates fugitive emissions from stockpiles (including uncrushed and crushed ore and finished pellets), material transfer points, plant roadways, tailings basin, pellet loading areas, and yard areas.

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.

Taconite ore is obtained using a strip-mining process. Surface material and rock are removed to expose the taconite ore-bearing rock layers. Blasting is used to break up the taconite ore, which is then scooped up using large cranes with shovels and loaded into trucks or railcars. The ore is transported from the mine to the primary crushers.

The ore crushing process begins when the taconite ore is dumped into the primary crusher which reduces the crude ore to a diameter of about 6 inches. Additional fine crushing further reduces the material to a size approximately ¾ of an inch in diameter. Intermediate vibratory screens remove the undersized material from the feed before it enters the next crusher. After it is adequately crushed, the ore is conveyed to 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. Taconite ore is then separated from the waste rock material using magnetic separation. The iron content of the slurry is further increased using a combination of hydraulic concentration (gravity settling) and chemical flotation. Typically, application of water is utilized to suppress particulate and HAP metal emissions from the concentrating processes.

From the concentration process, the taconite slurry enters the agglomerating process. In this part of the process, water is removed from the taconite slurry using vacuum disk filters or similar equipment and, at one plant, rotary dryers follow the disc filters and provide additional drying of the ore. The taconite is then mixed with binding agents in a balling drum which tumbles and rolls the taconite into unfired pellets. From the balling drum, the unfired pellets are conveyed to the indurating furnace.

The unfired taconite pellets enter the induration furnace where they are hardened and oxidized at a temperature of between 2,290 to 2,550 degrees Fahrenheit. Indurating furnaces are either straight grate furnaces or grate kiln furnaces. The hardened, finished pellets exit through the indurating furnace cooler.

The finished pellet handling process begins at the point where the fired

[1] Although defined as ''maximum individual risk,'' MIR refers only to cancer risk. MIR, one metric for assessing cancer risk, is the estimated risk if an individual were exposed to the maximum level of a pollutant for a lifetime.

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

Ore crushing and handling, ore drying, and finished pellet handling are all potentially significant points of particulate matter (PM) emissions. Taconite ore inherently contains trace metals, such as manganese, chromium, cobalt, arsenic, and lead, which are listed as HAP under CAA section 112(b) and the PM emissions from these three operations can contain these metal compounds. Manganese compounds are the predominant metal HAP emitted from ore crushing and handling, ore drying, and finished pellet handling.

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 PM from the taconite ore or from fuel (such as coal) fed into the furnaces. Manganese and arsenic compounds are the predominant metal HAP emitted by indurating furnaces. Other metal HAP emitted from these furnaces include chromium, lead, nickel, cadmium, and mercury. The second type of HAP is organic HAP, primarily formaldehyde, resulting as a product of incomplete fuel combustion. The third type of HAP is acid gases, such as hydrochloric acid (HCl) and hydrofluoric acid (HF). Fluorine and chlorine compounds in the raw materials are liberated during the indurating process and combine with moisture in the exhaust to form HCl and HF.

The current rule requires compliance with emission limits, operating limits for control devices, and work practice standards at all times except during periods of SSM. The emission limits are in the form of PM limits, which are a surrogate for metal HAP emissions as well as for HCl and HF for indurating furnaces. Emission limitations, shown in Table 2, apply to each ore crushing and handling operation, ore dryer, indurating furnace, and finished pellet handling operation.

TABLE 2—PM EMISSION LIMITS FOR TACONITE IRON ORE PROCESSING

| Affected source | Affected source is new or existing | Emission limits [1] |
|---|---|---|
| Ore crushing and handling emission units | Existing | 0.008 gr/dscf |
| | New | 0.005 gr/dscf. |
| Straight grate indurating furnace processing magnetite | Existing | 0.01 gr/dscf |
| | New | 0.006 gr/dscf. |
| Grate kiln indurating furnace processing magnetite | Existing | 0.01 gr/dscf. |
| | New | 0.006 gr/dscf. |
| Grate kiln indurating furnace processing hematite | Existing | 0.03 gr/dscf. |
| | New | 0.018 gr/dscf. |
| Finished pellet handling emission units | Existing | 0.008 gr/dscf. |
| | New | 0.005 gr/dscf. |
| Ore dryer | Existing | 0.052 gr/dscf. |
| | New | 0.025 gr/dscf. |

[1] gr/dscf = grains per dry standard cubic foot.

Performance tests are required to demonstrate compliance with the emission limits and must be conducted twice per 5-year period. The rule also requires that site-specific operating limits be established during the performance test for each control device and monitored continuously to demonstrate continuous compliance. Table 3 lists the operating parameters that must be established during the performance test and then monitored continuously.

TABLE 3—OPERATING PARAMETERS MONITORED TO DEMONSTRATE CONTINUOUS COMPLIANCE

| Control device [1] | Monitoring device [2] | Parameters monitored |
|---|---|---|
| Baghouse | Bag leak detection system | Relative change in PM loading. |
| Dynamic wet scrubber | CPMS | Scrubber water flow rate and either fan amperage or pressure drop. |
| Wet scrubbers (other than dynamic wet scrubbers) | CPMS | Pressure drop and scrubber water flow rate. |
| Dry ESP | COMS, or CPMS | Opacity Secondary voltage and secondary current. |
| Wet ESP | CPMS | Secondary voltage, stack outlet temperature, and water flow rate. |

[1] ESP = electrostatic precipitator.
[2] CPMS = continuous parameter monitoring system, COMS = continuous opacity monitor.

The current rule also includes operation and maintenance requirements for pellet indurating furnaces to ensure good combustion practices to minimize emissions of organic HAP (combustion-related HAP such as formaldehyde) and requires that sources of fugitive dust emissions at taconite iron ore processing plants be controlled using work practices described in detail in a facility's fugitive dust emissions control plan. The plan must address fugitive emissions from stockpiles (including uncrushed and crushed ore and finished pellets), material transfer points, plant roadways, tailings basin, pellet loading areas, and yard areas.

*C. What data collection activities were conducted to support this action?*

For the Taconite Iron Ore Processing source category, the EPA did not use data collection requests to gather emissions and other related data used in the analysis of risks. The data and data sources used to support this action are described in section II.D below.

*D. What other relevant background information and data are available?*

Information used to estimate emissions from taconite iron ore processing plants was obtained primarily from the EPA's 2014 National Emissions Inventory (NEI) database (*https://www.epa.gov/air-emissions-inventories/2014-national-emissions-inventory-nei-data*) and supplemental information submitted by industry. Data on the numbers, types, dimensions, and locations of the emission points for each facility were obtained from the NEI, state agencies, Google Earth™, and taconite iron ore processing industry staff. The HAP emissions from taconite iron ore processing plants were categorized by source into one of the five emission process groups as follows: Ore crushing and handling operations; ore drying; pellet induration; pellet handling operations; and fugitive sources. Data on HAP emissions, including the HAP emitted, emission source, emission rates, stack parameters (such as temperature, velocity, flow, etc.), and latitude and longitude were compiled into a draft modeling file.

To ensure the quality of the emissions data, the EPA subjected the draft modeling file to a variety of quality checks. The draft modeling file for each facility was made available to the facility to review the emission release parameters and the emission rates for their facilities. Source latitudes and longitudes reported by facilities were checked in Google Earth™ to verify accuracy and were corrected as needed. These and other quality control efforts resulted in a more accurate emissions dataset. The document, *Development of the Residual Risk Review Emissions Dataset for the Taconite Iron Ore Processing Source Category,* provides a detailed description of the development of the modeling dataset and is available in the docket for this rulemaking.

**III. Analytical Procedures and Decision-Making**

In this section, we describe the analyses performed to support the proposed decisions for the RTR and other issues addressed in this action.

*A. How do we consider risk in our decision-making?*

As discussed in section II.A of this preamble and in the Benzene NESHAP, in evaluating and developing standards under CAA section 112(f)(2), we apply a two-step approach to determine whether or not risks are acceptable and to determine if the standards provide an ample margin of safety to protect public health. As explained in the Benzene NESHAP, ''the first step judgment on acceptability cannot be reduced to any single factor'' and, thus, ''[t]he Administrator believes that the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information.'' 54 FR 38046, September 14, 1989. Similarly, with regard to the ample margin of safety determination, ''the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors.'' *Id.*

The Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source category. The EPA conducts a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source category, the hazard index (HI) for chronic exposures to HAP with the potential to cause noncancer health effects, and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause noncancer health effects.[2] The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The scope of the EPA's risk analysis is consistent with the EPA's response to comments on our policy under the Benzene NESHAP where the EPA explained that:

> ''[t]he policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of non-cancer health effects, and the uncertainties of the risk estimates. In this way, the effect on the most exposed individuals can be reviewed as well as the impact on the general public. These factors can then be weighed in each individual case. This approach complies with the *Vinyl Chloride* mandate that the Administrator ascertain an acceptable level of risk to the public by employing his expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA's consideration with respect to CAA section 112 regulations, and thereby implicitly permits consideration of any and all measures of health risk which the Administrator, in his judgment, believes are appropriate to determining what will 'protect the public health'.''

See 54 FR 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risk. The Benzene NESHAP explained that ''an MIR of approximately one in 10 thousand should ordinarily be the upper end of the range of acceptability. As risks increase above this benchmark, they become presumptively less acceptable under CAA section 112, and would be weighed with the other health risk measures and information in making an overall judgment on acceptability. Or, the Agency may find, in a particular case, that a risk that includes an MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors.'' *Id.* at 38045. In other words, risks that include an MIR above 100-in-1 million may be determined to be acceptable, and risks with an MIR below that level may be determined to be unacceptable, depending on all of the available health information. Similarly, with regard to the ample margin of safety analysis, the EPA stated in the Benzene NESHAP that: ''EPA believes the relative weight of the many factors that can be considered in selecting an ample margin of safety can only be determined for each specific source category. This occurs mainly because technological and economic factors (along with the health-related factors) vary from source category to source category.'' *Id.* at 38061. We also consider the uncertainties associated with the various risk analyses, as discussed earlier in this preamble, in our determinations of acceptability and ample margin of safety.

The EPA notes that it has not considered certain health information to date in making residual risk determinations. At this time, we do not attempt to quantify the HAP risk that may be associated with emissions from other facilities that do not include the source category under review, mobile source emissions, natural source emissions, persistent environmental pollution, or atmospheric transformation in the vicinity of the sources in the category.

The EPA understands the potential importance of considering an individual's total exposure to HAP in addition to considering exposure to HAP emissions from the source category and facility. We recognize that such consideration may be particularly important when assessing noncancer

[2] The MIR is defined as the cancer risk associated with a lifetime of exposure at the highest concentration of HAP where people are likely to live. The HQ is the ratio of the potential HAP exposure concentration to the noncancer dose-response value; the HI is the sum of HQs for HAP that affect the same target organ or organ system.

risk, where pollutant-specific exposure health reference levels (*e.g.,* reference concentrations (RfCs)) are based on the assumption that thresholds exist for adverse health effects. For example, the EPA recognizes that, although exposures attributable to emissions from a source category or facility alone may not indicate the potential for increased risk of adverse noncancer health effects in a population, the exposures resulting from emissions from the facility in combination with emissions from all of the other sources (*e.g.,* other facilities) to which an individual is exposed may be sufficient to result in an increased risk of adverse noncancer health effects. In May 2010, the Science Advisory Board (SAB) advised the EPA ''that RTR assessments will be most useful to decision makers and communities if results are presented in the broader context of aggregate and cumulative risks, including background concentrations and contributions from other sources in the area.'' [3]

In response to the SAB recommendations, the EPA incorporates cumulative risk analyses into its RTR risk assessments, including those reflected in this action. The Agency (1) conducts facility-wide assessments, which include source category emission points, as well as other emission points within the facilities; (2) combines exposures from multiple sources in the same category that could affect the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzes the ingestion route of exposure. In addition, the RTR risk assessments consider aggregate cancer risk from all carcinogens and aggregated noncancer HQs for all noncarcinogens affecting the same target organ or target organ system.

Although we are interested in placing source category and facility-wide HAP risk in the context of total HAP risk from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Estimates of total HAP risk from emission sources other than those that we have studied in depth during this RTR review would have significantly greater associated uncertainties than the source category or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

### *B. How do we perform the technology review?*

Our technology review focuses on the identification and evaluation of developments in practices, processes, and control technologies that have occurred since the MACT standards were promulgated. Where we identify such developments, we analyze their technical feasibility, estimated costs, energy implications, and non-air environmental impacts. We also consider the emission reductions associated with applying each development. This analysis informs our decision of whether it is ''necessary'' to revise the emissions standards. In addition, we consider the appropriateness of applying controls to new sources versus retrofitting existing sources. For this exercise, we consider any of the following to be a ''development'':

- Any add-on control technology or other equipment that was not identified and considered during development of the original MACT standards;
- Any improvements in add-on control technology or other equipment (that were identified and considered during development of the original MACT standards) that could result in additional emissions reduction;
- Any work practice or operational procedure that was not identified or considered during development of the original MACT standards;
- Any process change or pollution prevention alternative that could be broadly applied to the industry and that was not identified or considered during development of the original MACT standards; and
- Any significant changes in the cost (including cost effectiveness) of applying controls (including controls the EPA considered during the development of the original MACT standards).

In addition to reviewing the practices, processes, and control technologies that were considered at the time we originally developed the NESHAP, we review a variety of data sources in our investigation of potential practices, processes, or controls to consider. See sections II.C and II.D of this preamble for information on the specific data sources that were reviewed as part of the technology review.

### *C. How do we estimate post-MACT risk posed by the source category?*

In this section, we provide a complete description of the types of analyses that we generally perform during the risk assessment process. In some cases, we do not perform a specific analysis because it is not relevant. For example, in the absence of emissions of HAP known to be persistent and bioaccumulative in the environment (PB–HAP), we would not perform a multipathway exposure assessment. Where we do not perform an analysis, we state that we do not and provide the reason. While we present all of our risk assessment methods, we only present risk assessment results for the analyses actually conducted (see section IV.A of this preamble).

The EPA conducts a risk assessment that provides estimates of the MIR for cancer posed by the HAP emissions from each source in the source category, the HI for chronic exposures to HAP with the potential to cause noncancer health effects, and the HQ for acute exposures to HAP with the potential to cause noncancer health effects. The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Taconite Iron Ore Processing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* (also referred to as the Taconite Risk Report in this preamble, and available in Docket ID No. EPA–HQ–OAR–2017–0664). The methods used to assess risk (as described in the seven primary steps below) are consistent with those described by the EPA in the document reviewed by a panel of the EPA's SAB in 2009; [4] and described in the SAB review report issued in 2010. They are also consistent with the key recommendations contained in that report.

#### 1. How did we estimate actual emissions and identify the emissions release characteristics?

The HAP emissions from taconite iron ore processing plants fall into the following pollutant categories: Metals (HAP metals), acid gases (*i.e.,* HCl and HF), and combustion-related organic HAP, such as polycyclic aromatic hydrocarbons, dioxins/furans (D/F), benzene, and formaldehyde. The HAP

[3] Recommendations of the SAB Risk and Technology Review Methods Panel are provided in their report, which is available at: *https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf.*

[4] U.S. EPA. *Risk and Technology Review (RTR) Risk Assessment Methodologies: For Review by the EPA's Science Advisory Board with Case Studies—MACT I Petroleum Refining Sources and Portland Cement Manufacturing,* June 2009. EPA–452/R–09–006. *https://www3.epa.gov/airtoxics/rrisk/rtrpg.html.*

are emitted from several emission sources at taconite iron ore processing plants which, for the purposes of the source category risk assessment, have been categorized into five emission process groups as follows: ore crushing and handling operations, ore drying, pellet induration, finished pellet handling operations, and fugitive dust emissions control plan sources.

The main sources of emissions data include the NEI data submitted for calendar year 2014 and supplemental information submitted by industry (available in Docket ID No. EPA–HQ–OAR–2017–0664). Data on the numbers, types, dimensions, and locations of the emission points for each facility were obtained from the NEI, state agencies (*i.e.,* the Minnesota Pollution Control Agency and the Michigan Department of Environmental Quality), Google Earth™, and from representatives of the taconite iron ore processing industry. A description of the data, approach, and rationale used to develop actual HAP emissions estimates is discussed in more detail in the document, *Development of the Residual Risk Review Emissions Dataset for the Taconite Iron Ore Processing Source Category,* which is available in the docket (Docket ID No. EPA–HQ–OAR–2017–0664).

*2. How did we estimate MACT-allowable emissions?*

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during a specified annual time period. These ''actual'' emission levels are often lower than the emission levels allowed under the requirements of the current MACT standards. The emissions allowed under the MACT standards are referred to as the ''MACT-allowable'' emissions. We discussed the consideration of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed and final Hazardous Organic NESHAP RTR (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, we noted that assessing the risk at the MACT-allowable level is inherently reasonable since that risk reflects the maximum level facilities could emit and still comply with national emission standards. We also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP approach. (54 FR 38044, September 14, 1989.)

Allowable emission rates for the taconite iron ore processing plants were developed by scaling the actual emission rates. Specifically, once the actual emission rates were developed for a given facility, the allowable emission rate of each emission process group at a given facility was estimated by multiplying the actual emission rate of the emission process group by the ratio of the effective (maximum) production rate of that facility to the actual production rate of that facility during calendar year 2014. The ratios all exceeded 1.0 resulting in all allowable emissions being greater than actual emissions. For a detailed description of the estimation of allowable emissions, see the document, *Development of the Residual Risk Review Emissions Dataset for the Taconite Iron Ore Processing Source Category,* which is available in the docket (Docket ID No. EPA–HQ–OAR–2017–0664).

3. How do we conduct dispersion modeling, determine inhalation exposures, and estimate individual and population inhalation risk?

Both long-term and short-term inhalation exposure concentrations and health risk from the source category addressed in this action were estimated using the Human Exposure Model (HEM–3).[5] The HEM–3 performs three primary risk assessment activities: (1) Conducting dispersion modeling to estimate the concentrations of HAP in ambient air, (2) estimating long-term and short-term inhalation exposures to individuals residing within 50 kilometers (km) of the modeled sources, and (3) estimating individual and population-level inhalation risk using the exposure estimates and quantitative dose-response information.

a. Dispersion Modeling

The air dispersion model AERMOD, used by the HEM–3 model, is one of the EPA's preferred models for assessing air pollutant concentrations from industrial facilities.[6] To perform the dispersion modeling and to develop the preliminary risk estimates, HEM–3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion calculations. This library includes 1 year (2016) of hourly surface and upper air observations from 824 meteorological stations, selected to provide coverage of the United States and Puerto Rico. A second library of United States Census Bureau census block[7] internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which are also used in dispersion calculations. A third library of pollutant-specific dose-response values is used to estimate health risk. These are discussed below.

b. Risk From Chronic Exposure to HAP

In developing the risk assessment for chronic exposures, we use the estimated annual average ambient air concentrations of each HAP emitted by each source in the source category. The HAP air concentrations at each nearby census block centroid located within 50 km of the facility are a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. A distance of 50 km is consistent with both the analysis supporting the 1989 Benzene NESHAP (54 FR 38044, September 14, 1989) and the limitations of Gaussian dispersion models, including AERMOD.

For each facility, we calculate the MIR as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, 70 years) exposure to the maximum concentration at the centroid of each inhabited census block. We calculate individual cancer risk by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter (μg/m$^3$)) by its unit risk estimate (URE). The URE is an upper-bound estimate of an individual's incremental risk of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual risk assessments, we generally use UREs from the EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without IRIS values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) UREs, where available. In cases where new, scientifically credible dose-response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate. The pollutant-specific dose-response

[5] For more information about HEM–3, go to *https://www.epa.gov/fera/risk-assessment-and-modeling-human-exposure-model-hem.*

[6] U.S. EPA. Revision to the *Guideline on Air Quality Models: Adoption of a Preferred General Purpose (Flat and Complex Terrain) Dispersion Model and Other Revisions* (70 FR 68218, November 9, 2005).

[7] A census block is the smallest geographic area for which census statistics are tabulated.

values used to estimate health risk are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants.*

To estimate individual lifetime cancer risks associated with exposure to HAP emissions from each facility in the source category, we sum the risks for each of the carcinogenic HAP [8] emitted by the modeled facility. We estimate cancer risk at every census block within 50 km of every facility in the source category. The MIR is the highest individual lifetime cancer risk estimated for any of those census blocks. In addition to calculating the MIR, we estimate the distribution of individual cancer risks for the source category by summing the number of individuals within 50 km of the sources whose estimated risk falls within a specified risk range. We also estimate annual cancer incidence by multiplying the estimated lifetime cancer risk at each census block by the number of people residing in that block, summing results for all of the census blocks, and then dividing this result by a 70-year lifetime.

To assess the risk of noncancer health effects from chronic exposure to HAP, we calculate either an HQ or a target organ-specific hazard index (TOSHI). We calculate an HQ when a single noncancer HAP is emitted. Where more than one noncancer HAP is emitted, we sum the HQ for each of the HAP that affects a common target organ or target organ system to obtain a TOSHI. The HQ is the estimated exposure divided by the chronic noncancer dose-response value, which is a value selected from one of several sources. The preferred chronic noncancer dose-response value is the EPA RfC, defined as ''an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime'' (*https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary*). In cases where an RfC from the EPA's IRIS is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic noncancer dose-response value can be a value from the following prioritized sources, which define their dose-response values similarly to the EPA: (1) The Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (*https://www.atsdr.cdc.gov/mrls/index.asp*); (2) the CalEPA Chronic Reference Exposure Level (REL) (*https://oehha.ca.gov/air/crnr/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0*); or (3) as noted above, a scientifically credible dose-response value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA. The pollutant-specific dose-response values used to estimate health risks are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants.*

c. Risk From Acute Exposure to HAP That May Cause Health Effects Other Than Cancer

For each HAP for which appropriate acute inhalation dose-response values are available, the EPA also assesses the potential health risks due to acute exposure. For these assessments, the EPA makes conservative assumptions about emission rates, meteorology, and exposure location. In this proposed rulemaking, as part of our efforts to continually improve our methodologies to evaluate the risks that HAP emitted from categories of industrial sources pose to human health and the environment,[9] we are revising our treatment of meteorological data to use reasonable worst-case air dispersion conditions in our acute risk screening assessments instead of worst-case air dispersion conditions. This revised treatment of meteorological data and the supporting rationale are described in more detail in *Residual Risk Assessment for Taconite Iron Ore Processing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment.* We will be applying this revision in RTR rulemakings proposed on or after June 3, 2019.

To assess the potential acute risk to the maximally exposed individual, we use the peak hourly emission rate for each emission point,[10] reasonable worst-case air dispersion conditions (*i.e.,* 99th percentile), and the point of highest off-site exposure. Specifically, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions co-occur and that a person is present at the point of maximum exposure.

To characterize the potential health risks associated with estimated acute inhalation exposures to a HAP, we generally use multiple acute dose-response values, including acute RELs, acute exposure guideline levels (AEGLs), and emergency response planning guidelines (ERPG) for 1-hour exposure durations, if available, to calculate acute HQs. The acute HQ is calculated by dividing the estimated acute exposure concentration by the acute dose-response value. For each HAP for which acute dose-response values are available, the EPA calculates acute HQs.

An acute REL is defined as ''the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.'' [11] Acute RELs are based on the most sensitive, relevant, adverse health effect reported in the peer-reviewed medical and toxicological literature. They are designed to protect the most sensitive individuals in the population through the inclusion of margins of safety. Because margins of safety are incorporated to address data gaps and

[8] The EPA's 2005 *Guidelines for Carcinogen Risk Assessment* classifies carcinogens as: ''carcinogenic to humans,'' ''likely to be carcinogenic to humans,'' and ''suggestive evidence of carcinogenic potential.'' These classifications also coincide with the terms ''known carcinogen, probable carcinogen, and possible carcinogen,'' respectively, which are the terms advocated in the EPA's *Guidelines for Carcinogen Risk Assessment,* published in 1986 (51 FR 33992, September 24, 1986). In August 2000, the document, *Supplemental Guidance for Conducting Health Risk Assessment of Chemical Mixtures* (EPA/630/R–00/002), was published as a supplement to the 1986 document. Copies of both documents can be obtained from *https://cfpub.epa.gov/ncea/risk/recordisplay.cfm?deid=20533&CFID=70315376&CFTOKEN=71597944.* Summing the risk of these individual compounds to obtain the cumulative cancer risk is an approach that was recommended by the EPA's SAB in their 2002 peer review of the EPA's National Air Toxics Assessment (NATA) titled *NATA—Evaluating the National-scale Air Toxics Assessment 1996 Data—an SAB Advisory,* available at *https://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf.*

[9] See, *e.g.,* U.S. EPA. *Screening Methodologies to Support Risk and Technology Reviews (RTR): A Case Study Analysis* (Draft Report, May 2017. *https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*).

[10] In the absence of hourly emission data, we develop estimates of maximum hourly emission rates by multiplying the average actual annual emissions rates by a factor (either a category-specific factor or a default factor of 10) to account for variability. This is documented in *Residual Risk Assessment for Taconite Iron Ore Processing Source Category in Support of the 2019 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Technical Support Document for Acute Risk Screening Assessment.* Both are available in the docket for this rulemaking.

[11] CalEPA issues acute RELs as part of its Air Toxics Hot Spots Program, and the 1-hour and 8-hour values are documented in *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants,* which is available at *https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary.*

uncertainties, exceeding the REL does not automatically indicate an adverse health impact. AEGLs represent threshold exposure limits for the general public and are applicable to emergency exposures ranging from 10 minutes to 8 hours.[12] They are guideline levels for ''once-in-a-lifetime, short-term exposures to airborne concentrations of acutely toxic, high-priority chemicals.'' *Id.* at 21. The AEGL–1 is specifically defined as ''the airborne concentration (expressed as ppm (parts per million) or mg/m$^3$ (milligrams per cubic meter)) of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.'' The document also notes that ''Airborne concentrations below AEGL–1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste, and sensory irritation or certain asymptomatic, nonsensory effects.'' *Id.* AEGL–2 are defined as ''the airborne concentration (expressed as parts per million or milligrams per cubic meter) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.'' *Id.*

ERPGs are ''developed for emergency planning and are intended as health-based guideline concentrations for single exposures to chemicals.'' [13] *Id.* at 1. The ERPG–1 is defined as ''the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to 1 hour without experiencing other than mild transient adverse health effects or without perceiving a clearly defined, objectionable odor.'' *Id.* at 2. Similarly, the ERPG–2 is defined as ''the maximum airborne concentration below which it is believed that nearly all individuals could be exposed for up to one hour without experiencing or developing irreversible or other serious health effects or symptoms which could impair an individual's ability to take protective action.'' *Id.* at 1.

An acute REL for 1-hour exposure durations is typically lower than its corresponding AEGL–1 and ERPG–1. Even though their definitions are slightly different, AEGL–1s are often the same as the corresponding ERPG–1s, and AEGL–2s are often equal to ERPG–2s. The maximum HQs from our acute inhalation screening risk assessment typically result when we use the acute REL for a HAP. In cases where the maximum acute HQ exceeds 1, we also report the HQ based on the next highest acute dose-response value (usually the AEGL–1 and/or the ERPG–1).

For this source category, ore crushing and handling, ore drying, and pellet handling operations may have batch operation cycles with peak emissions as high as 10 times the average hourly actual emissions occurring for part of that cycle. Therefore, a factor of 10 was used to estimate peak hourly emissions for these sources. With regard to fugitive dust emissions (*e.g.,* stockpiles, material transfer points, plant roadways, tailings basin, pellet loading areas, and yard areas), we assumed peak hourly emissions could be as high as 10 times the average (*i.e.,* the default value described in footnote number 10) because we did not have sufficient data or information to derive a different value. However, with regard to indurating furnaces, which typically operate continuously for long periods of time with relatively minor fluctuations, it is estimated that emission rates could occasionally increase by a factor of up to two times the average hourly actual emission. Therefore, the EPA selected two as the appropriate multiplier to estimate maximum acute emissions from indurating furnaces. A more detailed discussion of the selection of the acute emission factors is available in the document *Development of the Residual Risk Review Emissions Dataset for the Taconite Iron Ore Processing Source Category,* available in the docket (Docket ID No. EPA–HQ–OAR–2017–0664).

In our acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP for which acute HQs are less than or equal to 1, and no further analysis is performed for these HAP. In cases where an acute HQ from the screening analysis is greater than 1, we assess the site-specific data to ensure that the acute HQ is at an off-site location. For this source category, for each HAP with an acute HQ value greater than 1, the data refinements employed consisted of plotting the HEM–3 polar grid results on aerial photographs of the facilities. We then assessed whether the highest acute HQs were off-site and at locations that may be accessible to the public (*e.g.,* roadways and public buildings). These refinements are discussed more fully in the Taconite Risk Report, which is available in the docket for this source category.

4. How do we conduct the multipathway exposure and risk screening assessment?

The EPA conducts a tiered screening assessment examining the potential for significant human health risks due to exposures via routes other than inhalation (*i.e.,* ingestion). We first determine whether any sources in the source category emit any HAP known to be persistent and bioaccumulative in the environment, as identified in the EPA's Air Toxics Risk Assessment Library (see Volume 1, Appendix D, at *https://www.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library.*

For the Taconite Iron Ore Processing source category, we identified PB–HAP emissions of arsenic, cadmium, D/F, lead, mercury, and polycyclic organic matter (POM), so we proceeded to the next step of the evaluation. Except for lead, the human health risk screening assessment for PB–HAP consists of three progressive tiers. In a Tier 1 screening assessment, we determine whether the magnitude of the facility-specific emissions of PB–HAP warrants further evaluation to characterize human health risk through ingestion exposure. To facilitate this step, we evaluate emissions against previously developed screening threshold emission rates for several PB–HAP that are based on a hypothetical upper-end screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology. Fate, Transport, and Ecological Exposure (TRIM.FaTE) model. The PB–HAP with screening threshold emission rates are arsenic compounds, cadmium compounds, chlorinated dibenzodioxins and furans, mercury compounds, and POM. Based on the EPA estimates of toxicity and bioaccumulation potential, these pollutants represent a conservative list for inclusion in multipathway risk assessments for RTR rules. (See Volume 1, Appendix D at *https://www.epa.gov/sites/production/files/2013-08/documents/volume_1_reflibrary.pdf.*) In this assessment, we

[12] National Academy of Sciences, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals,* page 2. Available at *https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf.* Note that the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances ended in October 2011, but the AEGL program continues to operate at the EPA and works with the National Academies to publish final AEGLs (*https://www.epa.gov/aegl*).

[13] *ERPGS Procedures and Responsibilities.* March 2014. American Industrial Hygiene Association. Available at: *https://www.aiha.org/get-involved/AIHAGuidelineFoundation/EmergencyResponsePlanningGuidelines/Documents/ERPG%20Committee%20Standard%20Operating%20Procedures%20%20-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf.*

compare the facility-specific emission rates of these PB–HAP to the screening threshold emission rates for each PB–HAP to assess the potential for significant human health risks via the ingestion pathway. The ratio of a facility's actual emission rate to the Tier 1 screening threshold emission rate is a ''screening value.''

We derive the Tier 1 screening threshold emission rates for these PB–HAP (other than lead compounds) to correspond to a maximum excess lifetime cancer risk of 1-in-1 million (*i.e.,* for arsenic compounds, polychlorinated dibenzodioxins and furans and POM) or, for HAP that cause noncancer health effects (*i.e.,* cadmium compounds and mercury compounds), a maximum HQ of 1. If the emission rate of any one PB–HAP or combination of carcinogenic PB–HAP in the Tier 1 screening assessment exceeds the Tier 1 screening threshold emission rate for any facility (*i.e.,* the screening value is greater than 1), we conduct a second screening assessment, which we call the Tier 2 screening assessment. The Tier 2 screening assessment separates the Tier 1 combined fisher and farmer exposure scenario into fisher, farmer, and gardener scenarios that retain upper-bound ingestion rates.

In the Tier 2 screening assessment, the location of each facility that exceeds a Tier 1 screening threshold emission rate is used to refine the assumptions associated with the Tier 1 fisher and farmer exposure scenarios at that facility. A key assumption in the Tier 1 screening assessment is that a lake and/or farm is located near the facility. As part of the Tier 2 screening assessment, we use a U.S. Geological Survey (USGS) database to identify actual waterbodies within 50 km of each facility and assume the fisher only consumes fish from lakes within that 50 km zone. We also examine the differences between local meteorology near the facility and the meteorology used in the Tier 1 screening assessment. We then adjust the previously-developed Tier 1 screening threshold emission rates for each PB–HAP for each facility based on an understanding of how exposure concentrations estimated for the screening scenario change with the use of local meteorology and USGS lakes database.

In the Tier 2 farmer scenario, we maintain an assumption that the farm is located within 0.5 km of the facility and that the farmer consumes meat, eggs, dairy, vegetables, and fruit produced near the facility. We may further refine the Tier 2 screening analysis by assessing a gardener scenario to characterize a range of exposures, with the gardener scenario being more plausible in RTR evaluations. Under the gardener scenario, we assume the gardener consumes home-produced eggs, vegetables, and fruit products at the same ingestion rate as the farmer. The Tier 2 screen continues to rely on the high-end food intake assumptions that were applied in Tier 1 for local fish (adult female angler at 99th percentile fish consumption), [14] and locally grown or raised foods (90th percentile consumption of locally grown or raised foods for the farmer and gardener scenarios).[15] If PB–HAP emission rates do not result in a Tier 2 screening value greater than 1, we consider those PB–HAP emissions to pose risks below a level of concern. If the PB–HAP emission rates for a facility exceed the Tier 2 screening threshold emission rates, we may conduct a Tier 3 screening assessment.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, locating residential/garden locations for urban and/or rural settings, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of meteorology and plume-rise on chemical fate and transport (a time-series analysis). If necessary, the EPA may further refine the screening assessment through a site-specific assessment.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, locating residential/garden locations for urban and/or rural settings, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of meteorology and plume rise on chemical fate and transport (a time-series analysis). If necessary, the EPA may further refine the screening assessment through a site-specific assessment.

In evaluating the potential multipathway risk from emissions of lead compounds, rather than developing a screening threshold emission rate, we compare maximum estimated chronic inhalation exposure concentrations to the level of the current National Ambient Air Quality Standard (NAAQS) for lead.[16] Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

For further information on the multipathway assessment approach, see the Taconite Risk Report, which is available in the docket for this action.

5. How do we conduct the environmental risk screening assessment?

a. Adverse Environmental Effect, Environmental HAP, and Ecological Benchmarks

The EPA conducts a screening assessment to examine the potential for an adverse environmental effect as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines ''adverse environmental effect'' as ''any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.''

The EPA focuses on eight HAP, which are referred to as ''environmental HAP,'' in its screening assessment: Six PB–HAP and two acid gases. The PB–HAP included in the screening assessment are arsenic compounds, cadmium compounds, D/F, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are HCl and HF.

HAP that persist and bioaccumulate are of particular environmental concern because they accumulate in the soil, sediment, and water. The acid gases, HCl and HF, are included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, we evaluate the following four exposure media: Terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish

[14] Burger, J. 2002. Daily consumption of wild fish and game: Exposures of high end recreationists. *International Journal of Environmental Health Research* 12:343–354.

[15] U.S. EPA. *Exposure Factors Handbook 2011 Edition (Final).* U.S. Environmental Protection Agency, Washington, DC, EPA/600/R–09/052F, 2011.

[16] In doing so, the EPA notes that the legal standard for a primary NAAQS—that a standard is requisite to protect public health and provide an adequate margin of safety (CAA section 109(b))—differs from the CAA section 112(f) standard (requiring, among other things, that the standard provide an ''ample margin of safety to protect public health''). However, the primary lead NAAQS is a reasonable measure of determining risk acceptability (*i.e.,* the first step of the Benzene NESHAP analysis) since it is designed to protect the most susceptible group in the human population—children, including children living near major lead emitting sources. 73 FR 67002/3; 73 FR 67000/3; 73 FR 67005/1. In addition, applying the level of the primary lead NAAQS at the risk acceptability step is conservative, since that primary lead NAAQS reflects an adequate margin of safety.

consumed by wildlife, and air. Within these four exposure media, we evaluate nine ecological assessment endpoints, which are defined by the ecological entity and its attributes. For PB–HAP (other than lead), both community-level and population-level endpoints are included. For acid gases, the ecological assessment evaluated is terrestrial plant communities.

An ecological benchmark represents a concentration of HAP that has been linked to a particular environmental effect level. For each environmental HAP, we identified the available ecological benchmarks for each assessment endpoint. We identified, where possible, ecological benchmarks at the following effect levels: Probable effect levels, lowest-observed-adverse-effect level, and no-observed-adverse-effect level. In cases where multiple effect levels were available for a particular PB–HAP and assessment endpoint, we use all of the available effect levels to help us to determine whether ecological risks exist and, if so, whether the risks could be considered significant and widespread.

For further information on how the environmental risk screening assessment was conducted, including a discussion of the risk metrics used, how the environmental HAP were identified, and how the ecological benchmarks were selected, see Appendix 9 of the Taconite Risk Report, which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

b. Environmental Risk Screening Methodology

For the environmental risk screening assessment, the EPA first determined whether any facilities in the Taconite Iron Ore Processing source category emitted any of the environmental HAP. For the Taconite Iron Ore Processing source category, we identified emissions of arsenic, cadmium, D/F, HCl, HF, lead, mercury, and POM. Because one or more of the environmental HAP evaluated are emitted by at least one facility in the source category, we proceeded to the second step of the evaluation.

c. PB–HAP Methodology

The environmental screening assessment includes six PB–HAP, arsenic compounds, cadmium compounds, D/F, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. With the exception of lead, the environmental risk screening assessment for PB–HAP consists of three tiers. The first tier of the environmental risk screening assessment uses the same health-protective conceptual model that is used for the Tier 1 human health screening assessment. TRIM.FaTE simulations were used to back-calculate Tier 1 screening threshold emission rates. The screening threshold emission rates represent the emission rate in tons of pollutant per year that results in media concentrations at the facility that equal the relevant ecological benchmark. To assess emissions from each facility in the category, the reported emission rate for each PB–HAP was compared to the Tier 1 screening threshold emission rate for that PB–HAP for each assessment endpoint and effect level. If emissions from a facility do not exceed the Tier 1 screening threshold emission rate, the facility ''passes'' the screening assessment, and, therefore, is not evaluated further under the screening approach. If emissions from a facility exceed the Tier 1 screening threshold emission rate, we evaluate the facility further in Tier 2.

In Tier 2 of the environmental screening assessment, the screening threshold emission rates are adjusted to account for local meteorology and the actual location of lakes in the vicinity of facilities that did not pass the Tier 1 screening assessment. For soils, we evaluate the average soil concentration for all soil parcels within a 7.5-km radius for each facility and PB–HAP. For the water, sediment, and fish tissue concentrations, the highest value for each facility for each pollutant is used. If emission concentrations from a facility do not exceed the Tier 2 screening threshold emission rate, the facility ''passes'' the screening assessment and typically is not evaluated further. If emissions from a facility exceed the Tier 2 screening threshold emission rate, we evaluate the facility further in Tier 3.

As in the multipathway human health risk assessment, in Tier 3 of the environmental screening assessment, we examine the suitability of the lakes around the facilities to support life and remove those that are not suitable (*e.g.,* lakes that have been filled in or are industrial ponds), adjust emissions for plume-rise, and conduct hour-by-hour time-series assessments. If these Tier 3 adjustments to the screening threshold emission rates still indicate the potential for an adverse environmental effect (*i.e.,* facility emission rate exceeds the screening threshold emission rate), we may elect to conduct a more refined assessment using more site-specific information. If, after additional refinement, the facility emission rate still exceeds the screening threshold emission rate, the facility may have the potential to cause an adverse environmental effect.

To evaluate the potential for an adverse environmental effect from lead, we compared the average modeled air concentrations (from HEM–3) of lead around each facility in the source category to the level of the secondary NAAQS for lead. The secondary lead NAAQS is a reasonable means of evaluating environmental risk because it is set to provide substantial protection against adverse welfare effects which can include ''effects on soils, water, crops, vegetation, man-made materials, animals, wildlife, weather, visibility and climate, damage to and deterioration of property, and hazards to transportation, as well as effects on economic values and on personal comfort and well-being.''

d. Acid Gas Environmental Risk Methodology

The environmental screening assessment for acid gases evaluates the potential phytotoxicity and reduced productivity of plants due to chronic exposure to HF and HCl. The environmental risk screening methodology for acid gases is a single-tier screening assessment that compares modeled ambient air concentrations (from AERMOD) to the ecological benchmarks for each acid gas. To identify a potential adverse environmental effect (as defined in section 112(a)(7) of the CAA) from emissions of HF and HCl, we evaluate the following metrics: The size of the modeled area around each facility that exceeds the ecological benchmark for each acid gas, in acres and km$^2$; the percentage of the modeled area around each facility that exceeds the ecological benchmark for each acid gas; and the area-weighted average screening value around each facility (calculated by dividing the area-weighted average concentration over the 50-km modeling domain by the ecological benchmark for each acid gas). For further information on the environmental screening assessment approach, see Appendix 9 of the Taconite Risk Report, which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

6. How do we conduct facility-wide assessments?

To put the source category risks in context, we typically examine the risks from the entire ''facility,'' where the facility includes all HAP-emitting operations within a contiguous area and under common control. In other words, we examine the HAP emissions not only from the source category emission points of interest, but also emissions of

HAP from all other emission sources at the facility for which we have data. For this source category, we conducted the facility-wide assessment using a dataset compiled from the 2014 NEI and supplemental information submitted by industry. The source category records of that dataset were evaluated and updated as described in section II.D of this preamble. Once a quality assured source category dataset was available, it was placed back with the remaining records from the NEI for that facility. The facility-wide file was then used to analyze risks due to the inhalation of HAP that are emitted ''facility-wide'' for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of the facility-wide risks that could be attributed to the source category addressed in this action. We also specifically examined the facility that was associated with the highest estimate of risk and determined the percentage of that risk attributable to the source category of interest. The Taconite Risk Report, available in Docket ID No. EPA–HQ–OAR–2017–0664, provides the methodology and results of the facility-wide analyses, including all facility-wide risks and the percentage of source category contribution to facility-wide risks.

7. How do we consider uncertainties in risk assessment?

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. Also included are those uncertainties specific to our acute screening assessments, multipathway screening assessments, and our environmental risk screening assessments. A more thorough discussion of these uncertainties is included in the Taconite Risk Report, which is available in the docket for this action. If a multipathway site-specific assessment was performed for this source category, a full discussion of the uncertainties associated with that assessment can be found in Appendix 11 of that document, *Site-Specific Human Health Multipathway Residual Risk Assessment Report.*

a. Uncertainties in the RTR Emissions Dataset

Although the development of the RTR emissions dataset involved quality assurance/quality control (QA/QC) processes, the accuracy of emissions values will vary depending on the source of the data, the degree to which data are incomplete or missing, the degree to which assumptions made to complete the datasets are accurate, errors in emission estimates, and other factors. The emission estimates considered in this analysis generally are annual totals for certain years, and they do not reflect short-term fluctuations during the course of a year or variations from year to year. The estimates of peak hourly emission rates for the acute effects screening assessment were based on an emission adjustment factor applied to the average annual hourly emission rates, which are intended to account for emission fluctuations due to normal facility operations.

b. Uncertainties in Dispersion Modeling

We recognize there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, we select some model options that have the potential to overestimate ambient air concentrations (*e.g.,* not including plume depletion or pollutant transformation). We select other model options that have the potential to underestimate ambient impacts (*e.g.,* not including building downwash). Other options that we select have the potential to either under- or overestimate ambient levels (*e.g.,* meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated by dispersion models, the approach we apply in the RTR assessments should yield unbiased estimates of ambient HAP concentrations. We also note that the selection of meteorology dataset location could have an impact on the risk estimates. As we continue to update and expand our library of meteorological station data used in our risk assessments, we expect to reduce this variability.

c. Uncertainties in Inhalation Exposure Assessment

Although every effort is made to identify all of the relevant facilities and emission points, as well as to develop accurate estimates of the annual emission rates for all relevant HAP, the uncertainties in our emission inventory likely dominate the uncertainties in the exposure assessment. Some uncertainties in our exposure assessment include human mobility, using the centroid of each census block, assuming lifetime exposure, and assuming only outdoor exposures. For most of these factors, there is neither an under- nor overestimate when looking at the maximum individual risk or the incidence, but the shape of the distribution of risks may be affected. With respect to outdoor exposures, actual exposures may not be as high if people spend time indoors, especially for very reactive pollutants or larger particles. For all factors, we reduce uncertainty when possible. For example, with respect to census-block centroids, we analyze large blocks using aerial imagery and adjust locations of the block centroids to better represent the population in the blocks. We also add additional receptor locations where the population of a block is not well represented by a single location.

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties are generally expressed quantitatively, and others are generally expressed in qualitative terms. We note, as a preface to this discussion, a point on dose-response uncertainty that is stated in the EPA's *2005 Guidelines for Carcinogen Risk Assessment;* namely, that ''the primary goal of EPA actions is protection of human health; accordingly, as an Agency policy, risk assessment procedures, including default options that are used in the absence of scientific data to the contrary, should be health protective'' (the EPA's *2005 Guidelines for Carcinogen Risk Assessment,* page 1–7). This is the approach followed here as summarized in the next paragraphs.

Cancer UREs used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk.[17] That is, they represent a ''plausible upper limit to the true value of a quantity'' (although this is usually not a true statistical

[17] IRIS glossary (*https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary*).

confidence limit). In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[18] Chronic noncancer RfC and reference dose (RfD) values represent chronic exposure levels that are intended to be health-protective levels. To derive dose-response values that are intended to be ''without appreciable risk,'' the methodology relies upon an uncertainty factor (UF) approach,[19] which considers uncertainty, variability, and gaps in the available data. The UFs are applied to derive dose-response values that are intended to protect against appreciable risk of deleterious effects.

Many of the UFs used to account for variability and uncertainty in the development of acute dose-response values are quite similar to those developed for chronic durations. Additional adjustments are often applied to account for uncertainty in extrapolation from observations at one exposure duration (*e.g.,* 4 hours) to derive an acute dose-response value at another exposure duration (*e.g.,* 1 hour). Not all acute dose-response values are developed for the same purpose, and care must be taken when interpreting the results of an acute assessment of human health effects relative to the dose-response value or values being exceeded. Where relevant to the estimated exposures, the lack of acute dose-response values at different levels of severity should be factored into the risk characterization as potential uncertainties.

Uncertainty also exists in the selection of ecological benchmarks for the environmental risk screening assessment. We established a hierarchy of preferred benchmark sources to allow selection of benchmarks for each environmental HAP at each ecological assessment endpoint. We searched for benchmarks for three effect levels (*i.e.,* no-effects level, threshold-effect level, and probable effect level), but not all combinations of ecological assessment/environmental HAP had benchmarks for all three effect levels. Where multiple effect levels were available for a particular HAP and assessment endpoint, we used all of the available effect levels to help us determine whether risk exists and whether the risk could be considered significant and widespread.

Although we make every effort to identify appropriate human health effect dose-response values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by this source category are lacking dose-response assessments. Accordingly, these pollutants cannot be included in the quantitative risk assessment, which could result in quantitative estimates understating HAP risk. To help to alleviate this potential underestimate, where we conclude similarity with a HAP for which a dose-response value is available, we use that value as a surrogate for the assessment of the HAP for which no value is available. To the extent use of surrogates indicates appreciable risk, we may identify a need to increase priority for an IRIS assessment for that substance. We additionally note that, generally speaking, HAP of greatest concern due to environmental exposures and hazard are those for which dose-response assessments have been performed, reducing the likelihood of understating risk. Further, HAP not included in the quantitative assessment are assessed qualitatively and considered in the risk characterization that informs the risk management decisions, including consideration of HAP reductions achieved by various control options.

For a group of compounds that are unspeciated (*e.g.,* glycol ethers), we conservatively use the most protective dose-response value of an individual compound in that group to estimate risk. Similarly, for an individual compound in a group (*e.g.,* ethylene glycol diethyl ether) that does not have a specified dose-response value, we also apply the most protective dose-response value from the other compounds in the group to estimate risk.

e. Uncertainties in Acute Inhalation Screening Assessments

In addition to the uncertainties highlighted above, there are several factors specific to the acute exposure assessment that the EPA conducts as part of the risk review under section 112 of the CAA. The accuracy of an acute inhalation exposure assessment depends on the simultaneous occurrence of independent factors that may vary greatly, such as hourly emission rates, meteorology, and the presence of a person. In the acute screening assessment that we conduct under the RTR program, we assume that peak emissions from the source category and reasonable worst-case air dispersion conditions (*i.e.,* 99th percentile) co-occur. We then include the additional assumption that a person is located at this point at the same time. Together, these assumptions represent a reasonable worst-case exposure scenario. In most cases, it is unlikely that a person would be located at the point of maximum exposure during the time when peak emissions and reasonable worst-case air dispersion conditions occur simultaneously.

f. Uncertainties in the Multipathway and Environmental Risk Screening Assessments

For each source category, we generally rely on site-specific levels of PB–HAP or environmental HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary or whether it is necessary to perform an environmental screening assessment. This determination is based on the results of a three-tiered screening assessment that relies on the outputs from models—TRIM.FaTE and AERMOD—that estimate environmental pollutant concentrations and human exposures for five PB–HAP (dioxins, POM, mercury, cadmium, and arsenic) and two acid gases (HF and HCl). For lead, we use AERMOD to determine ambient air concentrations, which are then compared to the secondary NAAQS standard for lead. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.[20]

Model uncertainty concerns whether the model adequately represents the actual processes (*e.g.,* movement and accumulation) that might occur in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screening assessments are appropriate and state-of-the-art for the multipathway and environmental screening risk assessments conducted in support of RTR.

Input uncertainty is concerned with how accurately the models have been configured and parameterized for the

[18] An exception to this is the URE for benzene, which is considered to cover a range of values, each end of which is considered to be equally plausible, and which is based on maximum likelihood estimates.

[19] See *A Review of the Reference Dose and Reference Concentration Processes,* U.S. EPA, December 2002, and *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry,* U.S. EPA, 1994.

[20] In the context of this discussion, the term ''uncertainty'' as it pertains to exposure and risk encompasses both *variability* in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as *uncertainty* in being able to accurately estimate the true result.

assessment at hand. For Tier 1 of the multipathway and environmental screening assessments, we configured the models to avoid underestimating exposure and risk. This was accomplished by selecting upper-end values from nationally representative datasets for the more influential parameters in the environmental model, including selection and spatial configuration of the area of interest, lake location and size, meteorology, surface water, soil characteristics, and structure of the aquatic food web. We also assume an ingestion exposure scenario and values for human exposure factors that represent reasonable maximum exposures.

In Tier 2 of the multipathway and environmental screening assessments, we refine the model inputs to account for meteorological patterns in the vicinity of the facility versus using upper-end national values, and we identify the actual location of lakes near the facility rather than the default lake location that we apply in Tier 1. By refining the screening approach in Tier 2 to account for local geographical and meteorological data, we decrease the likelihood that concentrations in environmental media are overestimated, thereby increasing the usefulness of the screening assessment. In Tier 3 of the screening assessments, we refine the model inputs again to account for hour-by-hour plume-rise and the height of the mixing layer. We can also use those hour-by-hour meteorological data in a TRIM.FaTE run using the screening configuration corresponding to the lake location. These refinements produce a more accurate estimate of chemical concentrations in the media of interest, thereby reducing the uncertainty with those estimates. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for all three tiers.

For the environmental screening assessment for acid gases, we employ a single-tiered approach. We use the modeled air concentrations and compare those with ecological benchmarks.

For all tiers of the multipathway and environmental screening assessments, our approach to addressing model input uncertainty is generally cautious. We choose model inputs from the upper end of the range of possible values for the influential parameters used in the models, and we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. This approach reduces the likelihood of not identifying high risks for adverse impacts.

Despite the uncertainties, when individual pollutants or facilities do not exceed screening threshold emission rates (*i.e.,* screen out), we are confident that the potential for adverse multipathway impacts on human health is very low. On the other hand, when individual pollutants or facilities do exceed screening threshold emission rates, it does not mean that impacts are significant, only that we cannot rule out that possibility and that a refined assessment for the site might be necessary to obtain a more accurate risk characterization for the source category.

The EPA evaluates the following HAP in the multipathway and/or environmental risk screening assessments, where applicable: arsenic, cadmium, D/F, lead, mercury (both inorganic and methyl mercury), POM, HCl, and HF. These HAP represent pollutants that can cause adverse impacts either through direct exposure to HAP in the air or through exposure to HAP that are deposited from the air onto soils and surface waters and then through the environment into the food web. These HAP represent those HAP for which we can conduct a meaningful multipathway or environmental screening risk assessment. For other HAP not included in our screening assessments, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, we may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond these that we are evaluating may have the potential to cause adverse effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

## IV. Analytical Results and Proposed Decisions

### *A. What are the analytical results and proposed decisions for this source category?*

#### 1. What are the results of the risk assessment and analyses?

As described in section III of this preamble, for the Taconite Iron Ore Processing source category, we conducted a risk assessment for all HAP emitted. We present results of the risk assessment briefly below and in more detail in the Taconite Risk Report, which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

#### a. Chronic Inhalation Risk Assessment Results

Table 4 below provides a summary of the results of the inhalation risk assessment for the source category. For more details about the estimated emission levels for actual and allowable emissions rates and the risk assessment methods and results, see the Taconite Risk Report, available in Docket ID No. EPA–HQ–OAR–2017–0664.

TABLE 4—TACONITE IRON ORE PROCESSING SOURCE CATEGORY INHALATION RISK ASSESSMENT RESULTS

| Risk assessment | Maximum individual cancer risk (in 1 million) | | Estimated population at increased risk of cancer $\geq$ 1-in-1 million | | Estimated annual cancer incidence (cases per year) | | Maximum chronic noncancer TOSHI [1] | | Maximum screening acute noncancer HQ [2] |
|---|---|---|---|---|---|---|---|---|---|
| | Based on actual emissions | Based on allowable emissions | Based on actual emissions | Based on allowable emissions | Based on actual emissions | Based on allowable emissions | Based on actual emissions | Based on allowable emissions | Based on actual emissions |
| Source Category | 2 | 6 | 38,000 | 43,000 | 0.001 | 0.001 | 0.2 | 0.2 | HQREL = <1 |
| Whole Facility | 2 | .................... | 40,000 | .................... | 0.001 | .................... | 0.2 | .................... | |

[1] The TOSHI is the sum of the chronic noncancer HQs for substances that affect the same target organ or organ system.
[2] The maximum estimated acute exposure concentration was divided by available short-term threshold values to develop HQ values.

Based on the results of the inhalation risk modeling using the actual emissions estimates, as shown in Table 4 of this preamble, the maximum individual cancer risk based on actual emissions (lifetime) is estimated to be 2-in-1 million (driven by arsenic and nickel from fugitive dust and indurating sources), the estimated maximum chronic noncancer TOSHI value based on actual emissions is 0.2 (driven by manganese compounds from fugitive dust and ore crushing sources), and the maximum screening acute noncancer HQ value (off-facility site) is less than 1 (driven by arsenic from fugitive dust and ore crushing sources). The total estimated annual cancer incidence (national) from these facilities based on actual emission levels is 0.001 excess cancer cases per year or 1 case in every 1,000 years. The results using allowable emissions indicate that the estimated maximum individual cancer risk based on allowable emissions (lifetime) is 6-in-1 million (driven by arsenic and nickel from fugitive dust and indurating sources) and the maximum chronic noncancer TOSHI value is 0.2 (driven by manganese compounds from fugitive dust and ore crushing sources).

b. Screening Level Acute Risk Assessment Results

Table 4 of this preamble shows the estimated acute risk results for the Taconite Iron Ore Processing source category. To estimate the peak emission rates from average emission rates, the screening analysis for acute impacts was based on an industry specific multiplier of 2 for indurating furnaces and a factor of 10 for all other emissions sources. For more detailed acute risk results, refer to the Taconite Risk Report, available in Docket ID No. EPA–HQ–OAR–2017–0664.

c. Multipathway Risk Screening Results

Results of the worst-case Tier 1 multipathway screening analysis indicate that PB–HAP emissions (based on estimates of actual emissions) from each of the eight facilities in the source category exceed the screening threshold emissions rate for the carcinogenic PB–HAP (combined D/F, POM, and arsenic screening values) with a maximum screening value of 3,000 for arsenic emissions. For the noncarcinogenic PB–HAP, all eight facilities have screening values greater than 1 for cadmium emissions with a maximum screening value of 20, and seven facilities have screening values greater than 1 for mercury emissions with a maximum screening value of 40. For the PB–HAP and facilities that did not screen out at Tier 1, we conducted a Tier 2 multipathway screening analysis.

The Tier 2 multipathway screen replaces some of the assumptions used in Tier 1 with site-specific data, the location of fishable lakes, and local wind direction and speed. In Tier 2, the gardener scenario is included to represent consumption of produce grown in rural gardens. It is important to note that, even with the inclusion of some site-specific information in the Tier 2 analysis, the multipathway screening analysis is still a very conservative, health-protective assessment (*i.e.,* upper-bound consumption of local fish, locally grown, and/or raised foods) and in all likelihood will yield results that serve as an upper-bound multipathway risk associated with a facility.

Based on the Tier 2 screening analysis, seven facilities emitting arsenic, D/F, and POM emissions have Tier 2 cancer screening values greater than 1 for the farmer scenario with a maximum screening value of 300. Arsenic emissions are driving the risk for the farmer scenario as well as the gardener scenario with a maximum Tier 2 gardener scenario cancer screening value of 200. The maximum Tier 2 cancer screening value for the fisher scenario is 30, with arsenic driving the risk. When we considered the effect multiple facilities within the source category could have on common lake(s) in the modeling domain, the maximum cancer screening value is 40.

For mercury, four facilities emit mercury emissions above the Tier 2 noncancer screening threshold emissions rate, with at least one facility with a screening value of 10 for the fisher scenario. When we considered the effect multiple facilities within the source category could have on common lake(s) in the modeling domain, mercury emissions resulted in a noncancer screening value of 20, with seven facilities contributing to the risk levels at common lakes. For cadmium, two facilities emit cadmium emissions above the Tier 2 noncancer screening threshold emissions rate, with at least one facility with a screening value of 2 for the fisher scenario. When we considered the effect multiple facilities within the source category could have on common lake(s) in the modeling domain, cadmium emissions exceeded the noncancer screening threshold emissions rate by a factor of 3, with seven facilities contributing to the risk levels at common lakes.

An exceedance of a screening threshold emissions rate (*i.e.,* a screening value greater than 1) in any of the tiers cannot be equated with a risk value or a HQ or HI. Rather, it represents a high-end estimate of what the risk or hazard may be. It represents the high-end estimate of risk because we choose inputs from the upper end of the range of possible values for the influential parameters used in the screens; and we assume that the exposed individual exhibits ingestion behavior that would lead to a high total exposure. For more details on the multipathway screening results, refer to Appendix 10 of the Taconite Risk Report, available in Docket ID No. EPA–HQ–OAR–2017–0664. Thus, facility emissions exceeding the screening threshold emissions rate by a factor of 2 (*i.e.,* a screening value of 2) for a non-carcinogen can be interpreted to mean that we are confident that the HQ would be lower than 2. Similarly, facility emissions exceeding the cancer screening threshold emissions rate by a factor of 20 (*i.e.,* a screening value of 20) for a carcinogen means that we are confident that the risk is lower than 20-in-1 million.

Based upon the maximum Tier 2 screening values for mercury (fisher scenario) and arsenic (fisher and gardener scenario) occurring from the same location, we proceeded to a site-specific assessment using TRIM.FaTE versus conducting a Tier 3 screen. We also selected this site for assessing noncancer risks from cadmium utilizing the fisher scenario as the site was comparable to the maximum Tier 2 location. The selected site represents the combined contribution of mercury, arsenic and cadmium emissions from five taconite iron ore processing plants.

The site selected was modeled using TRIM.FaTE to assess cancer risk from arsenic emissions and noncancer risks from mercury and cadmium emissions for the fisher and gardener scenarios. The final cancer risk based upon the fisher scenario and gardener scenario was less than 1-in-1 million from arsenic emissions. The final noncancer risks had a HI less than 1 for mercury (0.02) and for cadmium (0.01). Further details on the site-specific multipathway assessment can be found in Appendix 11 of the Taconite Risk Report, available in Docket ID No. EPA–HQ–OAR–2017–0664.

d. Environmental Risk Screening Results

As described in section III.C of this document, we conducted an environmental risk screening assessment for the Taconite Iron Ore Processing source category for the following pollutants: Arsenic, cadmium, D/F, HCl, HF, lead, mercury (methyl mercury and mercuric chloride), and POM.

In the Tier 1 screening analysis for PB–HAP (other than lead, which was evaluated differently), D/F and POM emissions had no exceedances of any of the ecological benchmarks evaluated. Arsenic emissions had Tier 1 exceedances for three surface soil benchmarks: Threshold level (plant communities), no-observed-adverse-effect-level (NOAEL) (avian ground insectivores—woodcock), and NOAEL (mammalian insectivores—shrew) with a maximum screening value of 4. Cadmium emissions had Tier 1 exceedances for two surface soil benchmarks: NOAEL (mammalian insectivores—shrew) and NOAEL (avian ground insectivores—woodcock) with a maximum screening value of 4. Cadmium emissions also had Tier 1 exceedances for three fish—avian piscivores benchmarks: NOAEL (merganser), geometric-maximum-allowable-toxicant-level (GMATL) (merganser), and lowest-observed-adverse-effect-level (LOAEL) (merganser) with a maximum screening value of 3. Divalent mercury emissions had Tier 1 exceedances for the following benchmarks: Sediment threshold level, surface soil threshold level (plant communities), and surface soil threshold level (invertebrate communities) with a maximum screening value of 3. Methyl mercury had Tier 1 exceedances for the following benchmarks: fish (avian/piscivores), NOAEL (merganser), surface soil NOAEL (mammalian insectivores—shrew), and surface soil NOAEL for avian ground insectivores (woodcock) with a maximum screening value of 2.

A Tier 2 screening analysis was performed for arsenic, cadmium, divalent mercury, and methyl mercury. In the Tier 2 screening analysis, there were no exceedances of any of the ecological benchmarks evaluated for any of the pollutants.

For lead, we did not estimate any exceedances of the secondary lead NAAQS. For HCl and HF, the average modeled concentration around each facility (*i.e.,* the average concentration of all off-site data points in the modeling domain) did not exceed any ecological benchmark. In addition, each individual modeled concentration of HCl and HF (*i.e.,* each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities.

Based on the results of the environmental risk screening analysis, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

e. Facility-Wide Risk Results

Six facilities have a facility-wide cancer MIR greater than or equal to 1-in-1 million. The maximum facility-wide cancer MIR is 2-in-1 million, driven by arsenic and nickel from fugitive dust and indurating emissions. The total estimated cancer incidence from the whole facility is 0.001 excess cancer cases per year, or one excess case in every 1,000 years. Approximately 40,000 people were estimated to have cancer risks above 1-in-1 million from exposure to HAP emitted from both source category and non-source category sources at six of the eight facilities in this source category. The maximum facility-wide TOSHI for the source category is estimated to be 0.2, mainly driven by emissions of manganese from fugitive dust and ore crushing emissions.

f. *What demographic groups might benefit from this regulation?*

To examine the potential for any environmental justice issues that might be associated with the source category, we performed a demographic analysis, which is an assessment of risks to individual demographic groups of the populations living within 5 km and within 50 km of the facilities. In the analysis, we evaluated the distribution of HAP-related cancer and noncancer risks from the Taconite Iron Ore Processing source category across different demographic groups within the populations living near facilities.

The results of the demographic analysis are summarized in Table 5 below. These results, for various demographic groups, are based on the estimated risks from actual emissions levels for the population living within 50 km of the facilities.

TABLE 5—TACONITE IRON ORE PROCESSING SOURCE CATEGORY DEMOGRAPHIC RISK ANALYSIS RESULTS

| | Nationwide | Population with cancer risk at or above 1-in-1 million due to taconite iron ore processing | Population with chronic noncancer HI above 1 due to taconite iron ore processing |
|---|---|---|---|
| Total Population | 317,746,049 | 38,000 | 0 |
| **White and Minority by Percent** | | | |
| White | 62 | 93 | 0 |
| Minority | 38 | 7 | 0 |
| **Minority Detail by Percent** | | | |
| African American | 12 | 1 | 0 |
| Native American | 0.8 | 2.8 | 0 |
| Hispanic or Latino | 18 | 1 | 0 |
| Other and Multiracial | 7 | 2 | 0 |
| **Income by Percent** | | | |
| Below the Poverty Level | 14 | 19 | 0 |
| Above the Poverty Level | 86 | 82 | 0 |
| **Education by Percent** | | | |
| Over 25 Without High a School Diploma | 14 | 8 | 0 |
| Over 25 With a High School Diploma | 86 | 92 | 0 |
| **Linguistically Isolated by Percent** | | | |
| Linguistically Isolated | 6 | 0.2 | 0 |

The results of the Taconite Iron Ore Processing source category risk assessment (described in section IV.A.1 of this preamble) indicates that actual emissions from the source category expose approximately 38,000 people to a cancer risk at or above 1-in-1 million and no one to a chronic noncancer HI greater than 1. The percent of minorities nationally (38 percent) is much higher than for the category population with cancer risk greater than or equal to 1-in-1 million (7 percent). The category population with cancer risk greater than or equal to 1-in-1 million has a greater percentage of Native American (2.8 percent) as compared to nationally (0.8 percent), but lower percentages for African American (1 percent) and Hispanic (1 percent) as compared to nationally, 12 percent and 18 percent, respectively. The category population with cancer risk greater than or equal to 1-in-1 million has about the same percentage of the population below the poverty level (18 percent) as compared to nationally (14 percent). The percentage of the population over 25 without a high school diploma and the percentage of the population that is linguistically isolated are lower for the category population (8 percent and 0.2 percent, respectively) than nationally (14 percent and 6 percent, respectively).

The methodology and the results of the demographic analysis are presented in a technical report titled *Risk and Technology Review—Analysis of Demographic Factors for Populations Living Near Taconite Iron Ore Processing Source Category Operations,* June 2019 (hereafter referred to as the *Taconite Iron Ore Processing Demographic Analysis Report*), which may be found in Docket ID No. EPA–HQ–OAR–2017–0664.

2. What are our proposed decisions regarding risk acceptability, ample margin of safety, and adverse environmental effect?

a. Risk Acceptability

As noted in section III.A of this preamble, we weigh all health risk factors in our risk acceptability determination, including the cancer MIR, the number of persons in various cancer and noncancer risk ranges, cancer incidence, the maximum noncancer TOSHI, the maximum acute noncancer HQ, the extent of noncancer risks, the distribution of cancer and noncancer risks in the exposed population, and risk estimation uncertainties (54 FR 38044, September 14, 1989).

For the Taconite Iron Ore Processing source category, the risk analysis indicates that the cancer risks to the individual most exposed could be up to 2-in-1 million due to actual emissions or up to 6-in-1 million based on allowable emissions. These risks are considerably less than 100-in-1 million, which is the presumptive upper limit of acceptable risk. The risk analysis also shows very low cancer incidence (0.001 cases per year for actual and allowable emissions), and we did not identify a potential for adverse chronic noncancer health effects. The acute noncancer risks based on actual emissions are low, with a maximum HQ of less than 1 (based on the REL) for arsenic. Therefore, we find there is little potential concern of acute noncancer health impacts from actual emissions. In addition, the risk assessment indicates no significant potential for multipathway health effects.

Considering all of the health risk information and factors discussed above, including the uncertainties discussed in section III.C.7 of this preamble, we propose to find that the risks from the Taconite Iron Ore Processing source category are acceptable.

b. Ample Margin of Safety Analysis

Although we are proposing that the risks from the Taconite Iron Ore Processing source category are acceptable, we are required to consider whether the MACT standards for the source category provide an ample margin of safety to protect public health. The risk estimates show that approximately 38,000 individuals in the exposed population have a cancer risk above 1-in-1 million based on actual emissions and 43,000 individuals have a cancer risk above 1-in-1 million based on allowable emissions. The MIR based on actual emissions is 2-in-1 million, and based on allowable emissions, the MIR is 6-in-1 million. With regard to chronic and acute noncancer risks, as described above in section IV.A.1, all HIs and HQs are below one. Under the ample margin of safety analysis, in addition to the health risks, we evaluated the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review as described in section III.B of this preamble) that could be applied to this source category to further reduce the risks (or potential risks) due to emissions of HAP identified in the risk assessment.

In this analysis, we focused on cancer risks since all the chronic and acute noncancer HIs and HQs are below one. The cancer risks are driven by metal HAP emissions (*e.g.,* arsenic, nickel, and chromium VI) from indurating furnaces and fugitive dust sources. The indurating furnaces are currently controlled via wet scrubbers. We evaluated the option of reducing emissions from indurating furnaces by installing a wet electrostatic precipitator (wet ESP) after the existing wet scrubbers. Under this scenario, we estimate that the current metal HAP emissions would be reduced by about 99.9 percent, and the MIR would be reduced from 2-in-1 million based on actual emissions and 6-in-1 based on allowable emissions to less than 1-in-1 million for both actual and allowable emissions. We estimate annual costs of about $167 million for the industry, with a cost effectiveness of about $16 million per ton of metal HAP reduced. Due to the relatively small reduction in risk and the substantial costs associated with this option, we are proposing that additional emissions controls for metal HAP from indurating furnaces are not necessary to provide an ample margin of safety to protect public health. See the technical memorandum titled *Taconite Iron Ore Processing—Ample Margin of Safety Analysis,* in Docket ID No. EPA–HQ–OAR–2017–0664 for details.

For the other affected sources that emit metal HAP (*i.e.,* ore crushing and handling operations, finished pellet handling operations, ore drying, and sources subject to the fugitive dust emission control plan), we did not identify any developments in processes, practices, or control technologies. Therefore, we are proposing that additional emissions controls for metal HAP from these affected sources are not necessary to provide an ample margin of safety to protect public health.

c. Environmental Effects

The emissions data for the Taconite Iron Ore Processing source category indicate that eight environmental HAP are emitted by sources within this source category: Arsenic, cadmium, D/F, mercury, POM, lead, HCl, and HF.

In the Tier 1 screening analysis for PB–HAP (other than lead, which was evaluated differently), D/F and POM emissions had no exceedances of any of the ecological benchmarks evaluated. Arsenic, cadmium, and mercury had Tier 1 exceedances for some of the benchmarks evaluated by a maximum screening value of 4. Therefore, a Tier 2 screening analysis was performed for arsenic, cadmium, and mercury. In the Tier 2 screening analysis, there were no exceedances of any of the ecological benchmarks evaluated for any of the pollutants.

The screening-level evaluation of the potential for adverse environmental effects from emissions of lead indicated that the secondary NAAQS for lead would not be exceeded by any facility. The screening-level evaluation of the potential for adverse environmental effects associated with emissions of HCl and HF from the Taconite Iron Ore Processing source category indicated that each individual concentration (*i.e.,* each off-site data point in the modeling domain) was below the ecological benchmarks for all facilities. In addition, we are unaware of any adverse environmental effects caused by HAP emitted by this source category. Therefore, we do not expect there to be an adverse environmental effect as a result of HAP emissions from this source category and we are proposing that it is not necessary to set a more stringent standard to prevent, taking into consideration costs, energy, safety, and other relevant factors, an adverse environmental effect.

B. What are the results and proposed decisions based on our technology review?

The MACT standards for the Taconite Iron Ore Processing source category require compliance with numeric emission limits for PM, a surrogate for metal HAP, for ore crushing and handling operations, ore dryers, pellet induration furnaces, and finished pellet handling sources and for acid gases for pellet indurating furnaces. The rule requires work practice standards to reduce PM (again as a surrogate for metal HAP) emissions from fugitive dust emission sources (*i.e.,* stockpiles, material transfer points, facility roadways, tailings basins, pellet loading areas, and yard areas). Furthermore, the rule includes operation and maintenance requirements for pellet indurating furnaces to ensure good combustion to minimize emissions of formaldehyde and other organic HAP that are products of incomplete combustion.

Under the technology review we searched, reviewed, and considered several sources of information to determine whether there have been developments in practices, processes, and control technologies as required by section 112(d)(6) of the CAA. Section III.B of this preamble describes the types of information and factors we consider to determine if there have been any such ''developments.'' Our investigations included internet searches, discussions with industry representatives during site visits to taconite iron ore processing plants, a review of state permits, and a review of state air quality and regional haze implementation plans from Minnesota and Michigan, the two states where taconite iron ore processing plants are located.

Particulate matter emissions from the pellet induration furnaces are controlled by wet scrubbers or wet ESPs. Based on our review, we identified wet ESPs as a potential development in control technology for indurating furnaces, as discussed under the ample margin of safety analysis (see section IV.A.2.b of this preamble). As described in our ample margin of safety analysis, we estimate the cost for implementing this control technology would be $167 million annualized costs for the source category, with estimated cost effectiveness of $16 million per ton of metal HAP. We are proposing that it is not necessary under CAA section 112(d)(6) to require these additional controls for indurating furnaces because of the high annualized costs and because these controls are not cost effective.

With regard to the ore crushing and handling, ore drying, and finished pellet handling emissions sources as well as for fugitive dust emissions, based on our searches and reviews of the information sources described above, we did not identify any developments in practices, processes, or control technologies. For more details, refer to the document, *Technology Review for the Taconite Iron Ore Processing Source Category,* which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

*C. What other actions are we proposing?*

In addition to the proposed determinations described above, we are proposing some revisions to the NESHAP. We are proposing revisions to the SSM provisions of the MACT rule in order to ensure that they are consistent with the Court decision in *Sierra Club* v. *EPA,* 551 F. 3d 1019 (DC Cir. 2008), which vacated two provisions that exempted sources from the requirement to comply with otherwise applicable CAA section 112(d) emission standards during periods of SSM. We are also proposing the following: (1) Facilities can reduce compliance testing duration of individual runs from 2 hours to 1 hour; (2) to remove pressure drop as a monitoring option for dynamic wet scrubbers; (3) to remove the requirements for monitoring pressure drop and conducting quarterly internal baghouse inspections whenever the baghouse is equipped with a bag leak detection system; and (4) various other changes to clarify testing, monitoring, recordkeeping, and reporting requirements and to correct typographical errors. Furthermore, we are proposing a determination that a certain compound (known as elongated mineral particulate) is not a HAP. Our analyses, proposed changes, and proposed determination related to these issues are discussed below.

1. SSM

In its 2008 decision in *Sierra Club* v. *EPA,* 551 F.3d 1019 (DC Cir. 2008), the Court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the Court vacated the SSM exemption contained in 40 CFR 63.6(f)(1) and (h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemption violates the CAA's requirement that some section 112 standards apply continuously.

Consistent with *Sierra Club* v. *EPA,* we are proposing the elimination of the SSM exemption in this NESHAP and we are proposing the standards apply at all times. We are also proposing several revisions to Table 2 (the General Provisions Applicability Table) which are explained in more detail below. For example, we are proposing to eliminate the incorporation of the General Provisions' requirement that sources develop an SSM plan. We also are proposing to eliminate and revise certain recordkeeping and reporting requirements related to the SSM exemption as described below.

The EPA has attempted to ensure that the provisions we are proposing to eliminate are inappropriate, unnecessary, or redundant in the absence of the SSM exemption. We are specifically seeking comment on whether we have successfully done so.

In proposing the standards in this rule, the EPA has considered startup and shutdown periods and, for the reasons explained below, is not proposing alternative standards for those periods. The associated control devices are operational before startup and during shutdown of the affected sources at taconite iron ore processing facilities. Therefore, we expect that emissions during startup and shutdown would be no higher than emissions during normal operations. We know of no reason why the existing standards should not apply at all times.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process, or monitoring equipment. (40 CFR 63.2) (definition of malfunction). The EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards and this reading has been upheld as reasonable by the Court in *U.S. Sugar Corp.* v. *EPA,* 830 F.3d 579, 606–610 (2016). Under section 112, emissions standards for new sources must be no less stringent than the level ''achieved'' by the best controlled similar source and for existing sources generally must be no less stringent than the average emission limitation ''achieved'' by the best performing 12 percent of sources in the category. There is nothing in section 112 that directs the Agency to consider malfunctions in determining the level ''achieved'' by the best performing sources when setting emission standards. As the Court has recognized, the phrase ''average emissions limitation achieved by the best performing 12 percent of sources ''says nothing about how the performance of the best units is to be calculated.'' *Nat'l Ass'n of Clean Water Agencies* v. *EPA,* 734 F.3d 1115, 1141 (D.C. Cir. 2013). While the EPA accounts for variability in setting emissions standards, nothing in CAA section 112 requires the Agency to consider malfunctions as part of that analysis. The EPA is not required to treat a malfunction in the same manner as the type of variation in performance that occurs during routine operations of a source. A malfunction is a failure of the source to perform in a ''normal or usual manner'' and no statutory language compels the EPA to consider such events in setting CAA section 112 standards.

As the Court recognized in *U.S. Sugar Corp,* accounting for malfunctions in setting standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. *Id.* at 608 (''the EPA would have to conceive of a standard that could apply equally to the wide range of possible boiler malfunctions, ranging from an explosion to minor mechanical defects. Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.''). As such, the performance of units that are malfunctioning is not ''reasonably'' foreseeable. See, *e.g. Sierra Club* v. *EPA,* 167 F.3d 658, 662 (D.C. Cir. 1999) (''The EPA typically has wide latitude in determining the extent of data-gathering necessary to solve a problem. We generally defer to an agency's decision to proceed on the basis of imperfect scientific information, rather than to 'invest the resources to conduct the perfect study.' ''). See also, *Weyerhaeuser* v. *Costle,* 590 F.2d 1011, 1058 (D.C. Cir. 1978) (''In the nature of things, no general limit, individual permit, or even any upset provision can anticipate all upset situations. After a certain point, the transgression of regulatory limits caused by 'uncontrollable acts of third parties,' such as strikes, sabotage, operator intoxication or insanity, and a variety of other eventualities, must be a matter for the administrative exercise of case-by-case enforcement discretion, not for specification in advance by regulation.''). In addition, emissions during a malfunction event can be significantly higher than emissions at any other time of source operation. For example, if an air pollution control device with 99-percent removal goes off-line as a result of a malfunction (as might happen if, for example, the bags in a baghouse catch fire) and the emission unit is a steady state type unit that would take days to shut down, the source would go from 99-percent control to zero control until the control device was repaired. The source's emissions during the malfunction would be 100 times higher than during normal operations. As such, the emissions over a 4-day malfunction period would exceed the annual emissions of the source during normal operations. As this example illustrates, accounting for malfunctions could lead to standards that are not reflective of (and significantly less stringent than) levels that are achieved by a well-performing non-malfunctioning source. It is reasonable to interpret CAA section 112 to avoid such a result. The EPA's approach to malfunctions is consistent with CAA section 112 and is a reasonable interpretation of the statute.

Although no statutory language compels the EPA to set standards for malfunctions, the EPA has the discretion to do so where feasible. For example, in the Petroleum Refinery Sector RTR, the EPA established a work practice standard for unique types of malfunction that result in releases from pressure relief devices (PRDs) or emergency flaring events because the EPA had information to determine that such work practices reflected the level of control that applies to the best performers. 80 FR 75178, 75211–14 (December 1, 2015). The EPA will consider whether circumstances warrant setting standards for a particular type of malfunction and, if so, whether the EPA has sufficient information to identify the relevant best performing sources and establish a standard for such malfunctions. (We also encourage commenters to provide any such information.)

Based on the EPA's knowledge of the processes and engineering judgement, malfunctions in the Taconite Iron Ore Processing source category are considered unlikely to result in a violation of the standard. Affected sources at taconite iron ore processing plants are controlled with add-on air pollution control devices which will continue to function in the event of a process upset. Also, processes in the industry are typically equipped with controls that will not allow startup of the emission source until the associated control device is operating and will automatically shut down the emission source if the associated controls malfunction. Indurating furnaces, which are the largest sources of HAP emissions, typically operate continuously for long periods of time with no significant spikes in emissions. These minimal fluctuations in emissions are controlled by the existing add-on air pollution control devices used at all plants in the industry.

In the unlikely event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, sudden, infrequent, not reasonably preventable, and was not instead caused, in part, by poor maintenance or careless operation. 40 CFR 63.2 (definition of malfunction).

If the EPA determines in a particular case that an enforcement action against a source for violation of an emission standard is warranted, the source can raise any and all defenses in that enforcement action and the federal district court will determine what, if any, relief is appropriate. The same is true for citizen enforcement actions. Similarly, the presiding officer in an administrative proceeding can consider any defense raised and determine whether administrative penalties are appropriate.

In summary, the EPA interpretation of the CAA and, in particular, section 112, is reasonable and encourages practices that will avoid malfunctions.

Administrative and judicial procedures for addressing exceedances of the standards fully recognize that violations may occur despite good faith efforts to comply and can accommodate those situations. *U.S. Sugar Corp.* v. *EPA,* 830 F.3d 579, 606–610 (2016).

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.6(e)(1)(i) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.6(e)(1)(i) describes the general duty to minimize emissions. Some of the language in that section is no longer necessary or appropriate in light of the elimination of the SSM exemption. We are proposing instead to add general duty regulatory text at 40 CFR 63.9600(a) that reflects the general duty to minimize emissions while eliminating the reference to periods covered by an SSM exemption. The current language in 40 CFR 3.6(e)(1)(i) characterizes what the general duty entails during periods of SSM. With the elimination of the SSM exemption, there is no need to differentiate between normal operations and SSM events in describing the general duty. Therefore, the language the EPA is proposing for 40 CFR 63.9600(a) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.6(e)(1)(ii) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.6(e)(1)(ii) imposes requirements that are not necessary with the elimination of the SSM exemption or are redundant with the general duty requirement being added at 40 CFR 63.9600(a).

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.6(e)(3) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Generally, these paragraphs require development of an SSM plan and specify SSM recordkeeping and reporting requirements related to the SSM plan. As noted, the EPA is proposing to remove the SSM exemptions. Therefore, affected units will be subject to an emission standard during such events. The applicability of a standard during such events will ensure that sources have ample incentive to plan for and achieve compliance and, thus, the SSM plan requirements are no longer necessary.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.6(f)(1) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club* v. *EPA* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standards apply continuously. Consistent with *Sierra Club* v. *EPA,* the EPA is proposing to revise standards in this rule to apply at all times.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.7(e)(1) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to add a performance testing requirement at 40 CFR 63.9621(a). The performance testing requirements we are proposing to add differ from the General Provisions performance testing provisions in several respects. The regulatory text removes the cross-reference to 40 CFR 63.7(e)(1) and does not include the language in 40 CFR 63.7(e)(1) that restated the SSM exemption and language that precluded startup and shutdown periods from being considered ''representative'' for purposes of performance testing. The proposed performance testing provisions will not allow performance testing during malfunctions. As in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. The EPA is proposing to add language that requires the owner or operator to record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Section 63.7(e) requires that the owner or operator make available to the Administrator such records ''as may be necessary to determine the condition of the performance test'' available to the Administrator upon request but does not specifically require the information to be recorded. The regulatory text the EPA is proposing to add to this provision builds on that requirement and makes explicit the requirement to record the information.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.8(c)(1)(i) and (iii) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' The cross-references to the general duty and SSM plan requirements in those subparagraphs are not necessary in light of other requirements of 40 CFR 63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the requirements of a quality control program for monitoring equipment (40 CFR 63.8(d)).

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.8(d)(3) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' The final sentence in 40 CFR 63.8(d)(3) refers to the General Provisions' SSM plan requirement which is no longer applicable. The EPA is proposing to add to the rule at 40 CFR 63.9632(b)(5) text that is identical to 40 CFR 63.8(d)(3) except for the final sentence with the reference to SSM.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(b)(2)(i) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.10(b)(2)(i) describes the recordkeeping requirements during startup and shutdown. These recording provisions are no longer necessary because the EPA is proposing that recordkeeping and reporting applicable to normal operations will apply to startup and shutdown. In the absence of special provisions applicable to startup and shutdown, such as a startup and shutdown plan, there is no reason to retain additional recordkeeping for startup and shutdown periods.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(b)(2)(ii) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction. The EPA is proposing to add such requirements to 40 CFR 63.9642. The regulatory text we are proposing to add differs from the General Provisions it is replacing in that the General Provisions requires the creation and retention of a record of the occurrence and duration of each malfunction of process, air pollution control, and monitoring equipment. The EPA is proposing that this requirement apply to any failure to meet an applicable standard and is requiring that the source record the date, time, and duration of the failure rather than the ''occurrence.'' The EPA is also proposing to add to 40 CFR 63.9642 a requirement that sources keep records that include a list of the affected source or equipment and actions taken to minimize emissions, an estimate of the quantity of each regulated pollutant emitted over the standard for which the source failed to meet the standard, and a description of the method used to estimate the emissions. Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing to require that sources keep records of this information to ensure that there is adequate information to allow the EPA to determine the severity of any failure to meet a standard, and to provide data that may document how the source met the general duty to minimize emissions when the source has failed to meet an applicable standard.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(b)(2)(iv) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' When applicable, the provision requires sources to record actions taken during SSM events when actions were inconsistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required. The requirement previously applicable under 40 CFR 63.10(b)(2)(iv)(B) to record actions to minimize emissions and record corrective actions is now applicable by reference to 40 CFR 63.9642.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(b)(2)(v) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' When applicable, the provision requires sources to record actions taken during SSM events to show that actions taken were consistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(c)(15) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' The EPA is proposing that 40 CFR 63.10(c)(15) no longer applies. When applicable, the provision allows an owner or operator to use the affected source's SSM plan or records kept to satisfy the recordkeeping requirements of the SSM plan, specified in 40 CFR 63.6(e), to also satisfy the requirements of 40 CFR 63.10(c)(10) through (12). The EPA is proposing to eliminate this requirement because SSM plans would no longer be required, and, therefore, 40 CFR 63.10(c)(15) no longer serves any useful purpose for affected units.

We are proposing to revise the General Provisions Applicability Table (Table 2) entry for 40 CFR 63.10(d)(5) by changing the ''yes'' in the column titled ''Applies to Subpart RRRRR'' to a ''no.'' Section 63.10(d)(5) describes the reporting requirements for startups, shutdowns, and malfunctions. To replace the General Provisions reporting requirement, the EPA is proposing to add reporting requirements to 40 CFR 63.9641. The replacement language differs from the General Provisions requirement in that it eliminates periodic SSM reports as a stand-alone report. We are proposing language that requires sources that fail to meet an applicable standard at any time to report the information concerning such events in the semi-annual compliance report already required under this rule. We are proposing that the report must contain the number, date, time, duration, and the cause of such events (including unknown cause, if applicable), a list of the affected source or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit, and a description of the method used to estimate the emissions.

Examples of such methods would include product-loss calculations, mass balance calculations, measurements when available, or engineering judgment based on known process parameters. The EPA is proposing this requirement to ensure that there is adequate information to determine compliance, to allow the EPA to determine the severity of the failure to meet an applicable standard, and to provide data that may document how the source met the general duty to minimize emissions during a failure to meet an applicable standard.

We will no longer require owners or operators to determine whether actions taken to correct a malfunction are consistent with an SSM plan, because SSM plans would no longer be required. The proposed amendments, therefore, eliminate the cross-reference to 40 CFR 63.10(d)(5)(i) that contains the description of the previously required SSM report format and submittal schedule from this section. These specifications are no longer necessary because the events will be reported in otherwise required reports with similar format and submittal requirements.

The proposed amendments eliminate the cross-reference to 40 CFR 63.10(d)(5)(ii), which requires an immediate report for SSM when a source failed to meet an applicable standard but did not follow the SSM plan. We will no longer require owners and operators to report when actions taken during a startup, shutdown, or malfunction were not consistent with an SSM plan, because SSM plans would no longer be required.

2. Electronic Reporting

The EPA is proposing that owners and operators of taconite iron ore processing plants submit electronic copies of required performance test reports and compliance reports through EPA's Central Data Exchange (CDX) using the Compliance and Emissions Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules,* available in Docket ID No. EPA–HQ–OAR–2017–0664. The proposed rule requires that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website[21] at the time of the test be submitted in the format generated through the use of the ERT and that other performance test results be submitted in portable document format (pdf) using the attachment module of the ERT. For compliance reports, the proposed rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI. A draft version of the proposed template for these reports is included in the docket for this rulemaking. The EPA specifically requests comment on the content, layout, and overall design of the template.

Additionally, we have identified two broad circumstances in which electronic reporting extensions may be provided. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting should occur as soon as possible. We are providing these potential extensions to protect owners and operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. The situation where an extension may be warranted due to outages of EPA's CDX or CEDRI which precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.9641. The situation where an extension may be warranted due to a *force majeure* event, which is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by

[21] *https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert.*

the affected facility that prevents an owner or operator from complying with the requirement to submit a report electronically as required by this rule is addressed in 40 CFR 63.9641. Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, and will further assist in the protection of public health and the environment. Furthermore, it will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the public. Moreover, electronic reporting is consistent with the EPA's plan [22] to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy [23] developed in response to the White House's Digital Government Strategy.[24] For more information on the benefits of electronic reporting, see the memorandum, *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules,* available in Docket ID No. EPA–HQ–OAR–2017–0664.

3. Performance Testing

The Taconite Iron Ore Processing NESHAP performance testing requirements specify that stack tests conducted for ore crushing and handling, finished pellet handling, ore drying, and indurating furnace affected sources must consist of three separate runs of a minimum of 2 hours for each run. Industry representatives have stated that 2-hour test runs are unnecessary because an adequate sample volume can be obtained when conducting a 1-hour test. Industry representatives also pointed out that Minnesota state rules for performance testing only require that test runs be 1 hour in duration. They claim longer run time increases the cost of testing without any improvement in the data collected. With the time needed for test contractors to set up and break down their sampling equipment, perform the necessary QA/QC checks, and conduct a minimum of 6 hours of testing for a three-run test on a single stack, testing can take 9 to 10 hours to complete.

The EPA has previously concluded that the representative method detection limit for EPA Method 5 of 40 CFR part 60, appendix A–3, is 2 milligrams for a sample volume of 1 dry standard cubic meter.[25] This is the approximate sample volume for a 1-hour test run. This detection limit is equivalent to 0.0026 gr/dscf, which is well below the emission limits in this rule. Additionally, we reviewed a number of test reports submitted during the development of this action. After examining those PM test results, we did not find any of the test results to be below the method detection limit, even when the test run was only 1 hour long.

Based upon our review of available information, we agree that a test run time of 1 hour should provide an adequate sample volume to determine compliance with the emission limits if good testing practices are followed. Therefore, we are proposing to revise the minimum time for test runs for performance tests conducted on ore crushing and handling, finished pellet handling, ore drying, and indurating furnace affected sources from a minimum of 2 hours for each test run to a minimum of 1 hour for each test run. While we agree that this change should not cause an issue with determining compliance, as the number of samples below the method detection limit should not increase as long as good testing practices are followed, we are also proposing that if the measurement result is reported as below the method detection limit, the method detection limit will be used for that value when calculating the average particulate concentration.

Performance testing of indurating furnaces is required no less frequently than twice per 5-year permit term. Industry has requested that the EPA revise the frequency to once every 5 years if the performance test results are less than 80 percent of the emissions limit. We currently do not have sufficient justification or data to support this change. Therefore, we are not proposing this change. However, we solicit comments, data, and information as to whether this change would be appropriate or if other possible alternatives to the current requirement should be considered that would provide the industry more flexibility while ensuring that emissions would remain below the PM limits. In particular, we are interested in emissions data or other information that would support a margin of 80 percent, or some other margin, as sufficient to ensure that emissions would not exceed the emission limits for the 5-year period.

4. Baghouse Monitoring

Under the current rule, baghouses that are used on affected sources to comply with the emission limits for PM are required to be equipped with a bag leak detection system in order to monitor the relative change in PM loadings. The current rule contains installation, operation, and maintenance requirements that apply to bag leak detection systems to ensure their proper performance. The Taconite Iron Ore Processing NESHAP also requires that the owner or operator monitor the daily pressure drop across each baghouse in addition to conducting physical inspections of several baghouse components on a daily, weekly, or monthly basis depending on the baghouse component. Then, the interior of the baghouse must be inspected on a quarterly basis to determine if there are air leaks. In view of the requirement for baghouses to be equipped with a bag leak detection system, the requirements to monitor baghouse pressure drop and to conduct baghouse inspections are redundant and, therefore unnecessary. Therefore, we are proposing to remove the requirements for conducting quarterly internal baghouse inspections whenever the baghouse is equipped with a bag leak detection system that is installed, operated, and maintained in compliance with the requirements in the Taconite Iron Ore Processing NESHAP. The use of bag leak detection systems is superior to older methods of monitoring baghouse performance (such as visual inspections) and is more consistent with monitoring

[22] EPA's *Final Plan for Periodic Retrospective Reviews,* August 2011. Available at: *https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154.*

[23] *E-Reporting Policy Statement for EPA Regulations,* September 2013. Available at: *https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf.*

[24] *Digital Government: Building a 21st Century Platform to Better Serve the American People,* May 2012. Available at: *https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html.*

[25] U.S. EPA. Memorandum from Conniesue Oldham to Bob Schell. *Revision of Estimated Method 5 Detection Limit.* June 15, 2012.

requirements for baghouses required in other EPA regulations.

Industry has also requested that the EPA revise the requirement at 40 CFR 63.9600(b)(2) to initiate corrective action to determine the cause of a bag leak detection system alarm within 1 hour of its occurrence. We currently do not have sufficient justification or data to support this change. Therefore, we are not proposing this change. However, we solicit comments, data, and information as to whether a longer time frame within which industry is required to initiate corrective action would be appropriate, or if other possible alternatives to the current requirement should be considered that would provide the industry more flexibility while ensuring that emissions would remain below the PM limits.

5. Dynamic Wet Scrubbers

The current rule requires that where dynamic wet scrubbers, also known as low energy scrubbers, are used to comply with PM emission limits, the owner or operator must establish site-specific operating limits for scrubber water flow rate and either fan amperage or pressure drop during the PM performance testing for each dynamic wet scrubber. Compliance with the operating limits is determined by monitoring the daily average scrubber water flow rate and either the daily average fan amperage or the daily average pressure drop. Since the MACT rule was promulgated, we have determined that pressure drop is not adequate for monitoring dynamic scrubbers as the pressure drop for these scrubbers is very low and does not vary greatly. Furthermore, the operator is not able to adjust or control the differential pressure in order to remain in compliance. Therefore, we are proposing to remove pressure drop as a monitoring option for dynamic wet scrubbers. Under the proposed amendments, dynamic wet scrubbers used to comply with the Taconite Iron Ore Processing NESHAP emission limits for PM would be required to establish and monitor the scrubber water flow rate and fan amperage. While we maintain that scrubber water flow is an appropriate operating parameter for these scrubbers, we request comment on whether an operating parameter other than fan amperage or pressure drop would be as effective or more appropriate to monitor in conjunction with scrubber water flow to ensure the continued removal efficiency of the scrubber.

6. Performance Testing of Similar Sources

Under the current rule, the owner/operator may elect to group up to six similar ore crushing and handling operations and finished pellet handling operations sources and conduct a compliance test on a single representative unit. The rule establishes the criteria that emission units must meet to be considered similar. This provision has the benefit of reducing testing costs for those facilities that can take advantage of it. Industry representatives requested that the EPA modify the rule language to allow up to 10 emission units in a group of similar sources. However, we currently do not have sufficient justification or data to support this change. Therefore, we are not proposing revisions to this requirement at this time. However, we request comments and information from companies and other stakeholders on the positive and/or negative aspects of increasing the number of similar sources that can be grouped for testing purposes, including the potential economic benefits for companies and potential environmental impacts, and whether the EPA should allow such an increase in the number of units in a group of similar sources for testing, and if so, why.

7. Elongated Mineral Particulate

In 2004, after promulgation of the original Taconite Iron Ore Processing NESHAP, the National Wildlife Federation filed a petition for review of that rule with the Court (Case No. 03–1458). In that petition, the National Wildlife Federation alleged that the EPA had failed to set standards for what they believed to be emissions of asbestos, or asbestos-like fibers, from taconite iron ore processing plants. We are referring to these compounds as amphibole ''elongated mineral particulate (EMP).'' The EPA subsequently requested, and was granted, a partial voluntary remand to further investigate this issue and consider possible options to address the issue, as appropriate. As part of the development of this RTR proposed rulemaking, we gathered and reviewed available information on the amphibole EMP. Based on available information, amphibole EMP emissions only occur from the operations at one of the taconite iron ore processing plants, due to the effects of the Duluth Gabbro Complex on the associated taconite iron ore mine—specifically, the Peter Mitchell Mine associated with the Northshore Mining Company processing plant located in Silver Bay, Minnesota.

After reviewing and evaluating available information, we have determined that the EMP do not meet the definition of ''asbestos'' found in current EPA regulations and technical documents. This is because asbestos is always defined as the asbestiform varieties of certain minerals (see 40 CFR 61.141, 763.83, and 763.163), whereas the EMP in question developed in the non-asbestiform geologic form. Also, a study by Ross *et al.* (*The search for asbestos within the Peter Mitchell Taconite iron ore mine, near Babbitt, Minnesota,* which is available in the docket, Docket ID No. EPA–HQ–OAR–2017–0664) found no asbestos in the Peter Mitchell Mine. Ross *et al.* analyzed 53 samples from 30 sites within the mine where fibrous minerals were thought to potentially occur. Samples were analyzed using transmission electron microscopes and other state-of-the-art equipment. No asbestos of any type was found in the mine pit samples. In another study by Wilson *et al.,* ambient air samples from monitors at the taconite mill and in a nearby town were analyzed. It was found that the fibers collected by the ambient air monitors were non-asbestiform ferroactinolite and grunerite, not asbestos. (*Risk assessment due to environmental exposures to fibrous particulates associated with taconite ore,* which is available in the docket, Docket ID No. EPA–HQ–OAR–2017–0664.)

We also evaluated the EMP to determine if they might meet the definition of ''fine mineral fibers'' (the other HAP listed in CAA section 112(b) which we initially thought might be interpreted to include EMP). Footnote 3 after the list of HAP found in CAA section 112(b)(1) explains that ''[f]ine mineral fibers includes mineral fiber emissions from facilities manufacturing or processing glass, rock or slag fibers (or other mineral derived fibers) of average diameter 1 micrometer or less.'' The *EPA Health Effects Notebook* (available at *https://www.epa.gov/haps/health-effects-notebook-hazardous-air-pollutants*) further explains that the term ''fine mineral fibers'' was intended to apply to the synthetic vitreous fibers glasswool, rockwool, slagwool, glass filaments, and refractory ceramic fibers. Based on the CAA definition, and further interpretation provided in the *EPA Health Effects Notebook,* we conclude that EMP do not meet the definition of ''fine mineral fibers'' because the taconite iron ore processing facilities are not manufacturing or processing synthetic vitreous fibers such as rockwool, glasswool, slagwool, glass filaments, and refractory ceramic fibers.

Since the EMP do not meet the definition of HAP pursuant to CAA section 112(b), the EPA did not review the EMP for regulation under CAA section 112. Nevertheless, we note that the EMP are a component of PM which are subject to control by the NESHAP as a surrogate for metal HAP and acid gases. We also note that the Minnesota Pollution Control Agency requires this facility to monitor the EMP and ensure ambient levels of EMP near the facility are no higher than levels found in a non-affected location (*i.e.,* St. Paul, Minnesota). Also, EMP are the subject of an exposure study being conducted in taconite communities in Minnesota by the EPA's Office of Research and Development (ORD) and the EPA's Region 5 office. More information on the EPA's review of the EMP and EPA's proposed determination is available in the memorandum, *EPA's Analysis of Elongated Mineral Particulate,* which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

*E. What compliance dates are we proposing?*

We are proposing that existing facilities must comply with all changes proposed in this action 180 days after promulgation of the final rule. All new or reconstructed facilities must comply with all requirements in the final rule upon startup. Our experience with similar industries that are required to convert reporting mechanisms, install necessary hardware and software, become familiar with the process of submitting performance test results electronically through the EPA's CEDRI, test these new electronic submission capabilities, reliably employ electronic reporting, and convert logistics of reporting processes to different time-reporting parameters, shows that a time period of a minimum of 90 days, and more typically, 180 days, is generally necessary to successfully complete these changes. Our experience with similar industries further shows that this sort of regulated facility generally requires a time period of 180 days to read and understand the amended rule requirements; evaluate their operations to ensure that they can meet the standards during periods of startup and shutdown as defined in the rule and make any necessary adjustments; adjust parameter monitoring and recording systems to accommodate revisions; and update their operations to reflect the revised requirements. The EPA recognizes the confusion that multiple different compliance dates for individual requirements would create and the additional burden such an assortment of dates would impose. From our assessment of the time frame needed for compliance with the entirety of the revised requirements, the EPA considers a period of 180 days to be the most expeditious compliance period practicable, and, thus, is proposing that existing affected sources be in compliance with all of this regulation's revised requirements within 180 days of the regulation's effective date.

## V. Summary of Cost, Environmental, and Economic Impacts

*A. What are the affected sources?*

The Taconite Iron Ore Processing source category consists of eight facilities. One facility (Empire Mine) that is currently in a state of indefinite idle, is expected to resume operations once market conditions become more favorable. Also, a new facility is under construction near Nashwauk, Minnesota. The date that this new facility will begin operations is unknown, but not expected until after completion of this rulemaking. The affected sources at a taconite iron ore processing plant include ore crushing and handling operations, ore dryers, indurating furnaces, and finished pellet handling operations. The owner/operator of a taconite iron ore processing plant must also prepare and operate according to a fugitive dust emissions control plan to minimize emissions from sources of fugitive emissions (*e.g.,* stockpiles, tailings basins, roadways, pellet loading areas, material transfer points, and yard areas).

*B. What are the air quality impacts?*

In this action, we are proposing no new emission limits and no additional controls; therefore, no air quality impacts are expected as a result of the proposed amendments.

*C. What are the cost impacts?*

The proposed amendments include no changes to emission standards or add-on controls. As described in section IV.C.3 of this preamble, the proposed amendments would reduce emissions performance test run times from 2 hours to 1 hour and remove the unnecessary requirement to conduct quarterly internal visual inspections of baghouses that are equipped with a bag leak detection system. The proposed amendments would replace the current reporting requirements with electronic reporting. Electronic reporting eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, and minimizing data reporting errors, ultimately reducing the burden on regulated facilities. Therefore, the proposed amendments impose no additional costs. In fact, the amendments and clarifications to rule language are expected to result in a reduction of current costs because compliance will be more straightforward. As described in the cost memorandum, we estimate the proposed amendments will result in an overall cost savings of $190,000 per year mainly due to the reduced testing duration and elimination of need for internal visual baghouse inspections.

*D. What are the economic impacts?*

Economic impact analyses focus on changes in market prices and output levels. If changes in market prices and output levels in the primary markets are significant enough, impacts on other markets may also be examined. Both the magnitude of costs associated with the proposed requirements and the distribution of these costs among affected facilities can have a role in determining how the market will change in response to a proposed rule. Because the overall costs and savings associated with the proposed revisions are relatively small, no significant economic impacts from the proposed amendments are anticipated.

*E. What are the benefits?*

While the proposed amendments would not result in reductions in emissions of HAP, this action, if finalized, would result in improved monitoring, compliance, and implementation of the rule. Also, the electronic reporting requirements will enhance transparency by making performance test results and compliance reports more readily available to the public.

## VI. Request for Comments

We solicit comments on this proposed action. In addition to general comments on this proposed action, we are also interested in additional data that may improve the risk assessments and other analyses. We are specifically interested in receiving any improvements to the data used in the site-specific emissions profiles used for risk modeling. Such data should include supporting documentation in sufficient detail to allow characterization of the quality and representativeness of the data or information. Section VII of this preamble provides more information on submitting data.

## VII. Submitting Data Corrections

The site-specific emissions profiles used in the source category risk and demographic analyses and instructions are available for download on the RTR website at *https://www.epa.gov/*

*stationary-sources-air-pollution/taconite-iron-ore-processing-national-emission-standards-hazardous.* The data files include detailed information for each HAP emissions release point for the facilities in the source category.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any ''improved'' data that you have, if available. When you submit data, we request that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR website, complete the following steps:

1. Within this downloaded file, enter suggested revisions to the data fields appropriate for that information.

2. Fill in the commenter information fields for each suggested revision (*i.e.,* commenter name, commenter organization, commenter email address, commenter phone number, and revision comments).

3. Gather documentation for any suggested emissions revisions (*e.g.,* performance test reports, material balance calculations).

4. Send the entire downloaded file with suggested revisions in Microsoft® Access format and all accompanying documentation to Docket ID No. EPA–HQ–OAR–2017–0664 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at that facility (or facilities). We request that all data revision comments be submitted in the form of updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR website at *https://www.epa.gov/stationary-sources-air-pollution/taconite-iron-ore-processing-national-emission-standards-hazardous.*

## VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *https://www.epa.gov/laws-regulations/laws-and-executive-orders.*

### *A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*

This action is not a significant regulatory action and was, therefore, not submitted to OMB for review.

### *B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs*

This action is not expected to be an Executive Order 13771 regulatory action because this action is not significant under Executive Order 12866.

### *C. Paperwork Reduction Act (PRA)*

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The information collection request (ICR) document that the EPA prepared has been assigned EPA ICR number 2050.08. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

We are proposing amendments that require electronic reporting, remove the malfunction exemption, and impose other revisions that affect reporting and recordkeeping for taconite iron ore processing facilities. This information would be collected to assure compliance with 40 CFR part 63, subpart RRRRR.

*Respondents/affected entities:* Owners or operators of taconite iron ore processing facilities.

*Respondent's obligation to respond:* Mandatory (40 CFR part 63, subpart LLLLL).

*Estimated number of respondents:* Eight (total).

*Frequency of response:* Initial, semiannual, and annual.

*Total estimated burden:* The annual recordkeeping and reporting burden for facilities to comply with all of the requirements in the NESHAP is estimated to be 1,000 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* The annual recordkeeping and reporting burden for facilities to comply with all of the requirements in the NESHAP is estimated to be $550,000 (per year). The only costs associated with the information collection activity is labor cost. There are no capital/startup or operation and maintenance costs for this ICR.

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 the EPA's regulations in 40 CFR are listed in 40 CFR part 9.

Submit your comments on the Agency's need for this information, the accuracy of the provided burden estimates, and any suggested methods for minimizing respondent burden to the EPA using the docket identified at the beginning of this rule. You may also send your ICR-related comments to OMB's Office of Information and Regulatory Affairs via email to *OIRA_submission@omb.eop.gov,* Attention: Desk Officer for the EPA. Since OMB is required to make a decision concerning the ICR between 30 and 60 days after receipt, OMB must receive comments no later than October 25, 2019. The EPA will respond to any ICR-related comments in the final rule.

### *D. Regulatory Flexibility Act (RFA)*

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. Based on the Small Business Administration size category for this source category, no small entities are subject to this action.

### *E. Unfunded Mandates Reform Act (UMRA)*

This action does not contain any unfunded mandate as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments. The action imposes no enforceable duty on any state, local, or tribal governments or the private sector.

### *F. Executive Order 13132: Federalism*

This action does not have federalism implications. It will not have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

### *G. Executive Order 13175: Consultation and Coordination With Indian Tribal Governments*

This action does not have tribal implications as specified in Executive Order 13175. No tribal governments own facilities subject to this proposed action. Thus, Executive Order 13175 does not apply to this action. However, since tribal officials expressed significant interest in this rulemaking, consistent with the EPA Policy on Consultation and Coordination with Indian Tribes, a tribal consultation is planned for this rulemaking.

### *H. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

This action is not subject to Executive Order 13045 because it is not economically significant as defined in Executive Order 12866, and because the EPA does not believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. This action, if finalized, would result in improved monitoring, compliance, and implementation of the rule, which could lower the risk to all people affected by emissions from these facilities, including children. This action's health and risk assessments are contained in section IV of this preamble and in the Taconite Risk Report, which is available in the docket.

*I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution or Use*

This action is not subject to Executive Order 13211, because it is not a significant regulatory action under Executive Order 12866.

*J. National Technology Transfer and Advancement Act (NTTAA)*

This action involves technical standards. The EPA proposes to use ANSI/ASME PTC 19.10–1981 Part 10 (2010), ''Flue and Exhaust Gas Analyses,'' manual portion only, as an alternative to EPA Method 3B and incorporates the alternative method by reference. The ANSI/ASME PTC 19.10–1981 Part 10 (2010) method incorporates both manual and instrumental methodologies for the determination of oxygen content of the exhaust gas. The manual method segment of the oxygen determination is performed through the absorption of oxygen. The method is acceptable as an alternative to EPA Method 3B and is available from the American Society of Mechanical Engineers (ASME) at *http://www.asme.org;* by mail at Three Park Avenue, New York, NY 10016–5990; or by telephone at (800) 843–2763.

*K. Executive Order 12898: Federal Actions To Address Environmental Justice in Minority Populations and Low-Income Populations*

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994). To the extent that this action, if finalized, would result in improved monitoring, compliance, and implementation of the rule, we believe that it could decrease the risks posed by taconite iron ore processing facilities for these populations. This action's health and risk assessments are contained in section IV of this action. The documentation for this decision is contained in section IV.A.1 of this preamble and in the Taconite Risk Report, which is available in Docket ID No. EPA–HQ–OAR–2017–0664.

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

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

Dated: August 28, 2019.

**Andrew R. Wheeler,**

*Administrator.*

For the reasons set forth in the preamble, the EPA proposes to amend 40 CFR part 63 as follows:

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

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

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

■ 2. Section 63.14 is amended by revising paragraphs (e)(1) and (n)(3) to read as follows:

**§ 63.14 Incorporations by reference.**

* * * * *

(e) * * *

(1) ANSI/ASME PTC 19.10–1981, Flue and Exhaust Gas Analyses [Part 10, Instruments and Apparatus], issued August 31, 1981, IBR approved for §§ 63.309(k), 63.457(k), 63.772(e) and (h), 63.865(b), 63.1282(d) and (g), 63.1625(b), 63.3166(a), 63.3360(e), 63.3545(a), 63.3555(a), 63.4166(a), 63.4362(a), 63.4766(a), 63.4965(a), 63.5160(d), table 4 to subpart UUUU, 63.9307(c), 63.9323(a), 63.9621(b) and (c), 63.11148(e), 63.11155(e), 63.11162(f), 63.11163(g), 63.11410(j), 63.11551(a), 63.11646(a), and 63.11945, table 5 to subpart DDDDD, table 4 to subpart JJJJJ, table 4 to subpart KKKKK, tables 4 and 5 of subpart UUUUU, table 1 to subpart ZZZZZ, and table 4 to subpart JJJJJJ.

* * * * *

(n) * * *

(3) EPA–454/R–98–015, Office of Air Quality Planning and Standards (OAQPS), Fabric Filter Bag Leak Detection Guidance, September 1997, *https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=2000D5T6.PDF,* IBR approved for §§ 63.548(e), 63.864(e), 63.7525(j), 63.8450(e), 63.8600(e), 63.9632(a)(5), and 63.11224(f).

* * * * *

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

■ 3. Section 63.9583 is revised to read as follows:

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

(a) If you have an affected source the construction or reconstruction of which is commenced before December 18, 2002, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you no later than October 30, 2006, except as provided in paragraphs (f)(1) and (2) of this section.

(b) If you have an affected source the construction or reconstruction of which is commenced on or after December 18, 2002, and its initial startup date is on or before October 30, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you by October 30, 2003, except as noted in paragraphs (f)(1) and (2) of this section.

(c) If you have an affected source and its initial startup date is after October 30, 2003, you must comply with each emission limitation, work practice standard, and operation and maintenance requirement in this subpart that applies to you upon initial startup, except as noted in paragraphs (f)(1) and (2) of this section.

(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, except as noted in paragraphs (f)(1) and (2) of this section.

(2) All other parts of the taconite iron ore processing plant must be in compliance with this subpart no later than 3 years after the plant becomes a major source, except as noted in paragraphs (f)(1) and (2) of this section.

(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.

(f)(1) If you have an affected source the construction or reconstruction of which is commenced before September 25, 2019, you must comply with the following requirements of this subpart by [DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**]: § 63.9590(b)(2); § 63.9600(a); § 63.9610(a) introductory text; § 63.9621(a); § 63.9622(b) introductory text, (b)(1) and (2) and (d)(2); § 63.9623(b)(2); § 63.9631(c); § 63.9632(a)(3); § 63.9634(b)(3), (f) introductory text, and (f)(1), (3), and (4);

§ 63.9637; § 63.9641(b)(7)(ii), (b)(8)(ii) and (iv), (c), (e), (g), (h), (i), and (j); § 63.9642(a)(4), (5), and (6) and (b)(3); § 63.9643(d); Table 2 to this subpart.

(2) If you have an affected source the construction or reconstruction of which is commenced on or after September 25, 2019, you must comply with all the requirements of this subpart by [DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**] or the date of startup, whichever is later.

■ 4. Section 63.9590 is amended by revising paragraph (b)(2) to read as follows:

**§ 63.9590 What emission limitations must I meet?**

* * * * *

(b) * * *

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

* * * * *

■ 5. Section 63.9600 is amended by revising paragraphs (a) and (b)(2) introductory text to read as follows:

**§ 63.9600 What are my operation and maintenance requirements?**

(a) You must always operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require the owner or operator to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(b) * * *

(2) Corrective action procedures for bag leak detection systems. In the event a bag leak detection system alarm is triggered, you must initiate corrective action to determine the cause of the alarm within 1 hour of the alarm, initiate corrective action to correct the cause of the problem within 24 hours of the alarm, and complete the corrective action as soon as practicable. If the alarm sounds more than 5 percent of the operating time during a 6-month period as determined according to § 63.9634(d)(3), it is considered an operating parameter deviation. Corrective actions may include, but are not limited to, the actions listed in paragraphs (b)(2)(i) through (vi) of this section.

* * * * *

■ 6. Section 63.9610 is amended by revising paragraph (a) introductory text and removing and reserving paragraph (c) to read as follows:

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

(a) You must be in compliance with the requirements in paragraphs (a)(1) through (6) of this section at all times.

* * * * *

■ 7. Section 63.9620 is amended by revising paragraph (f) introductory text and removing paragraph (f)(3) to read as follows:

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

* * * * *

(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) and (2) of this section.

* * * * *

■ 8. Section 63.9621 is amended by revising paragraphs (a), (b)(1) and (2), and (c)(1) and (2) to read as follows:

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

(a) You must conduct each performance test that applies to your affected source under normal maximum operating conditions of the affected source. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. You must also conduct each performance test that applies to your affected source according to the requirements in paragraphs (b) and (c) of this section.

(b) * * *

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

(i) Method 1 or 1A in appendix A–1 to part 60 of this chapter 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, or 2F in appendix A–1 to part 60 of this chapter or Method 2G in appendix A–2 to part 60 of this chapter, as applicable, to determine the volumetric flow rate of the stack gas.

(iii) Method 3A or 3B in appendix A–2 to part 60 of this chapter to determine the dry molecular weight of the stack gas. The voluntary consensus standard ANSI/ASME PTC 19.10–1981—Part 10 (incorporated by reference—see § 63.14) may be used as an alternative to the manual procedures (but not instrumental procedures) in Method 3B.

(iv) Method 4 in appendix A–3 to part 60 of this chapter to determine the moisture content of the stack gas.

(v) Method 5 or 5D in appendix A–3 to part 60 of this chapter or Method 17 in appendix A–6 to part 60 of this chapter to determine the concentration of particulate matter.

(2) Each Method 5, 5D, or 17 performance test must consist of three separate runs. Each run must be conducted for a minimum of 1 hour. If any measurement result is reported as below the method detection limit, use the method detection limit for that value when calculating the average particulate matter concentration. The average particulate matter concentration from the three runs will be used to determine compliance, as shown in Equation 1 of this section.

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

Where:

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

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

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

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

* * * * *

(c) * * *

(1) Determine the concentration of particulate matter for each stack according to the test methods listed in paragraphs (c)(1)(i) through (v) of this section.

(i) Method 1 or 1A in appendix A–1 to part 60 of this chapter 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, or 2F in appendix A–1 to part 60 of this chapter or Method 2G in appendix A–2 to part 60 of this chapter, as applicable, to determine the volumetric flow rate of the stack gas.

(iii) Method 3A or 3B in appendix A–2 to part 60 of this chapter to determine the dry molecular weight of the stack gas. The voluntary consensus standard ANSI/ASME PTC 19.10–1981—Part 10 (incorporated by reference—see § 63.14) may be used as an alternative to the manual procedures (but not instrumental procedures) in Method 3B.

(iv) Method 4 in appendix A–3 to part 60 of this chapter to determine the moisture content of the stack gas.

(v) Method 5 or 5D in appendix A–3 to part 60 of this chapter to determine the concentration of particulate matter.

(2) Each Method 5 or 5D performance test must consist of three separate runs. Each run must be conducted for a minimum of 1 hour. If any measurement result is reported as below the method detection limit, use the method detection limit for that value when calculating the average particulate matter concentration. The average particulate matter concentration from the three runs will be used to determine compliance, as shown in Equation 1 of this section.

* * * * *

■ 9. Section 63.9622 is amended by revising paragraphs (b) and (d)(2) to read as follows:

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

* * * * *

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

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

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

* * * * *

(d) * * *

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

* * * * *

■ 10. Section 63.9623 is amended by revising paragraph (b)(2) to read as follows:

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

* * * * *

(b) * * *

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

* * * * *

■ 11. Section 63.9625 is amended by revising the introductory text to read as follows:

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

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

* * * * *

■ 12. Section 63.9631 is amended by revising paragraphs (a) introductory text and (c) to read as follows:

**§ 63.9631 What are my monitoring requirements?**

(a) For each baghouse applied to meet any particulate matter emission limit in Table 1 to this subpart, you must install, operate, and maintain a bag leak detection system to monitor the relative change in particulate matter loadings according to the requirements in § 63.9632(a), and conduct inspections at their specified frequencies according to the requirements in paragraphs (a)(1) through (6) and (8) of this section. For each baghouse applied to meet any particulate matter emission limit in Table 1 to this subpart that is not required by § 63.9632(a) to be equipped with a bag leak detection system, you must conduct inspections at their specified frequencies according to the requirements in paragraphs (a)(1) through (8) of this section.

* * * * *

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

* * * * *

■ 13. Section 63.9632 is amended by:

■ a. Revising paragraphs (a) introductory text and (a)(1).

■ b. Redesignating paragraphs (a)(3) through (8) as paragraphs (a)(4) through (9).

■ c. Adding new paragraph (a)(3).

■ d. Revising newly redesignated paragraphs (a)(4), (a)(5) introductory text, (a)(7) introductory text, and (a)(7)(i).

■ e. Revising paragraphs (b)(3) through (6) and (f)(2) and (4).

The revisions and addition read as follows:

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

(a) For each negative pressure baghouse or positive pressure baghouse equipped with a stack, applied to meet any particulate emission limit in Table 1 to this subpart, you must install, operate, and maintain a bag leak detection system for each exhaust stack according to the requirements in paragraphs (a)(1) through (9) of this section.

(1) A bag leak detection system installed before September 25, 2019, 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. A bag leak detection system installed after September 25, 2019, must be certified by the manufacturer to be capable of detecting emissions of particulate matter at concentrations of 1 milligram per actual cubic meter (0.00044 grains per actual cubic foot) or less.

* * * * *

(3) The bag leak detection system must be equipped with a device to continuously record the output signal from the sensor.

(4) The system must be equipped with an alarm that will sound when an increase in relative particulate loadings is detected over the alarm level set point established according to paragraph (a)(5) of this section. The alarm must be located such that it can be heard by the appropriate plant personnel.

(5) For each bag leak detection system, you must develop and submit to the Administrator for approval, a site-specific monitoring plan that addresses the items identified in paragraphs (a)(5)(i) through (v) of this section. The monitoring plan shall be consistent with the manufacturer's specifications and recommendations contained in the U.S. Environmental Protection Agency (U.S. EPA) guidance document, ''Fabric Filter Bag Leak Detection Guidance'' (EPA–454/R–98–015) (incorporated by reference—see § 63.14). You must operate and maintain the bag leak detection system according to the site-specific monitoring plan at all times. The plan shall describe all of the items in paragraphs (a)(5)(i) through (v) of this section.

* * * * *

(7) Following initial adjustment, do not adjust sensitivity or range, averaging period, alarm set point, or alarm delay time, without approval from the Administrator except as provided for in paragraph (a)(7)(i) of this section. In no event may the sensitivity be increased more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection that demonstrates the baghouse is in good operating condition.

(i) Once per quarter, you may adjust the sensitivity or range of the bag leak detection system to account for seasonal effects, including temperature and humidity, according to the procedures identified in the site-specific monitoring plan required under paragraph (a)(5) of this section.

* * * * *

(b) * * *

(3) Performance evaluation procedures, a schedule for performing such procedures, and acceptance criteria (*e.g.,* calibrations), as well as corrective action to be taken if a performance evaluation does not meet the acceptance criteria. If a CPMS calibration fails, the CPMS is considered to be inoperative until you take corrective action and the system passes calibration.

(4) Ongoing operation and maintenance procedures and a schedule for preventative maintenance procedures, in a manner consistent with good air pollution control practices and in accordance with the general requirements of § 63.8(c)(1)(ii), (c)(3), (c)(4)(ii), and (c)(7) and (8).

(5) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d)(1) and (2). The owner or operator shall keep these written procedures on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, the owner or operator shall keep previous (*i.e.,* superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan.

(6) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c)(1) through (14), (e)(1), and (e)(2)(i).

* * * * *

(f) * * *

(2) You must develop and implement a quality control program for operating and maintaining each COMS according to § 63.8(a) and (b), (c)(1)(ii), (c)(2) through (8), (d)(1) and (2), and (e) through (g) and Procedure 3 in appendix F to 40 CFR part 60. At a minimum, the quality control program must include a daily calibration drift assessment, quarterly performance audit, and annual zero alignment of each COMS.

* * * * *

(4) You must determine and record the 6-minute average opacity for periods during which the COMS is not out of control. All COMS must complete a minimum of one cycle of sampling and analyzing for each successive 10-second period and one cycle of data recording for each successive 6-minute period.

■ 14. Section 63.9633 is amended by revising paragraphs (a) and (b) to read as follows:

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

(a) Except for monitoring malfunctions, out of control periods, 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, out of control periods, 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.

* * * * *

■ 15. Section 63.9634 is amended by:

■ a. Revising paragraphs (b)(3), (d) introductory text, and (d)(2).

■ b. Adding paragraph (d)(3).

■ c. Revising paragraphs (f) introductory text, (f)(1), (3), and (4), (h)(1), and (j)(1) and (2).

The revisions and addition read as follows:

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

* * * * *

(b) * * *

(3) For ore crushing and handling and finished pellet handling emission units not selected for initial performance testing and defined within a group of similar emission units in accordance with § 63.9620(e), the site-specific operating limits established for the emission unit selected as representative of a group of similar emission units will be used as the operating limit for each emission unit within the group. The operating limit established for the representative unit must be met by each emission unit within the group.

* * * * *

(d) For each baghouse applied to meet any particulate emission limit in Table 1 to this subpart, you must demonstrate continuous compliance by completing the requirements in paragraphs (d)(1) through (3) of this section.

* * * * *

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

(3) Each bag leak detection system must be operated and maintained such that the alarm does not sound more than 5 percent of the operating time during a 6-month period. Calculate the alarm time as specified in paragraphs (d)(3)(i) through (iii) of this section.

(i) If inspection of the fabric filter demonstrates that no corrective action is required, no alarm time is counted.

(ii) If corrective action is required, each alarm time (*i.e.,* time that the alarm sounds) is counted as a minimum of 1 hour.

(iii) If it takes longer than 1 hour to initiate corrective action, each alarm time is counted as the actual amount of time taken to initiate corrective action.

* * * * *

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

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

* * * * *

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

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

* * * * *

(h) * * *

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

* * * * *

(j) * * *

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

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

* * * * *

■ 16. Section 63.9637 is revised to read as follows:

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

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

(b) [Reserved]

■ 17. Section 63.9640 is amended by revising paragraph (e)(2) to read as follows:

### § 63.9640 What notifications must I submit and when?

* * * * *

(e) * * *

(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). If the performance test results have been submitted electronically in accordance with § 63.9641(f), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to the Compliance and Emissions Data Reporting Interface (CEDRI) by the date the notification of compliance status report is submitted.

■ 18. Section 63.9641 is amended by:

■ a. Revising paragraphs (a)(2) and (4), (b) introductory text, and (b)(2) and (3).

■ b. Removing and reserving paragraph (b)(4).

■ c. Revising paragraphs (b)(7), (b)(8) introductory text, (b)(8)(ii) through (vii) and (b)(8)(ix), and (c).

■ d. Adding paragraphs (f), (g), and (h).

The revisions and additions read as follows:

### § 63.9641 What reports must I submit and when?

(a) * * *

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

* * * * *

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

* * * * *

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

* * * * *

(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. If your report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces the requirement in this paragraph (b)(2).

(3) Date of report and beginning and ending dates of the reporting period. You are no longer required to provide the date of report when the report is submitted via CEDRI.

* * * * *

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

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

(ii) Information on the affected sources or equipment, the emission limited deviation from, the start date, start time, duration in hours, and cause of each deviation (including unknown cause) as applicable, an estimate of the quantity in pounds of each regulated pollutant emitted over an emission limit and a description of the method used to estimate the emissions, 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.

* * * * *

(ii) The start date, start time, and duration in hours (or minutes for COMS) that each continuous monitoring system was inoperative, except for zero (low-level) and high-level checks.

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

(iv) For each affected source or equipment, the date, the time that each deviation started and stopped, the cause of the deviation, and whether each deviation occurred during a period of malfunction or during another period.

(v) The total duration in hours (or minutes for COMS) of all deviations for each CMS during the reporting period, the total operating time in hours of the affected source 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 in hours (or minutes for COMS) of the deviations during the reporting period including those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(vii) The total duration in hours (or minutes for COMS) of continuous monitoring system downtime for each continuous monitoring system during the reporting period, the total operating time in hours of the affected source 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.

* * * * *

(ix) The monitoring equipment manufacturer and model number and the pollutant or parameter monitored.

* * * * *

(c) *Submitting compliance reports electronically.* Beginning on [DATE 180 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], submit all subsequent compliance reports to the EPA via CEDRI, which can be accessed through the EPA's Central Data Exchange (CDX) (*https://cdx.epa.gov/*). You must use the appropriate electronic report template on the CEDRI website (*https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri*) for this subpart. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/SPPD/CORE CBI Office, Attention: Taconite Iron Ore Processing Sector Lead, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described earlier in this paragraph (c).

* * * * *

(f) *Performance tests.* Within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (f)(1) through (3) of this section.

(1) *Data collected using test methods supported by the EPA's Electronic Reporting Tool (ERT) as listed on the EPA's ERT website (https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert) at the time of the test.* Submit the results of the performance test to the EPA via CEDRI, which can be accessed through the EPA's CDX (*https://cdx.epa.gov/*). The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

(2) *Data collected using test methods that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the test.* The results of the performance test must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the ERT generated package or alternative file to the EPA via CEDRI.

(3) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (f)(1) or (2) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraphs (f)(1) and (2) of this section.

(g) *Claims of EPA system outage.* If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of

EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (g)(1) through (7) of this section.

(1) You must have been or will be precluded from accessing CEDRI and submitting a required report within the time prescribed due to an outage of either the EPA's CEDRI or CDX systems.

(2) The outage must have occurred within the period of time beginning five business days prior to the date that the submission is due.

(3) The outage may be planned or unplanned.

(4) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(5) You must provide to the Administrator a written description identifying:

(i) The date(s) and time(s) when CDX or CEDRI was accessed and the system was unavailable;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to EPA system outage;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(6) The decision to accept the claim of EPA system outage and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(7) In any circumstance, the report must be submitted electronically as soon as possible after the outage is resolved.

(h) *Claims of force majeure.* If you are required to electronically submit a report through CEDRI in the EPA's CDX, you may assert a claim of force majeure for failure to timely comply with the reporting requirement. To assert a claim of force majeure, you must meet the requirements outlined in paragraphs (h)(1) through (5) of this section.

(1) You may submit a claim if a force majeure event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning five business days prior to the date the submission is due. For the purposes of this section, a force majeure event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (*e.g.,* hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (*e.g.,* large scale power outage).

(2) You must submit notification to the Administrator in writing as soon as possible following the date you first knew, or through due diligence should have known, that the event may cause or has caused a delay in reporting.

(3) You must provide to the Administrator:

(i) A written description of the force majeure event;

(ii) A rationale for attributing the delay in reporting beyond the regulatory deadline to the force majeure event;

(iii) Measures taken or to be taken to minimize the delay in reporting; and

(iv) The date by which you propose to report, or if you have already met the reporting requirement at the time of the notification, the date you reported.

(4) The decision to accept the claim of force majeure and allow an extension to the reporting deadline is solely within the discretion of the Administrator.

(5) In any circumstance, the reporting must occur as soon as possible after the force majeure event occurs.

■ 19. Section 63.9642 is amended by:

■ a. Revising paragraph (a) introductory text.

■ b. Removing and reserving paragraph (a)(2).

■ c. Adding paragraphs (a)(4) through (6).

■ d. Revising paragraph (b)(3).

The revisions and additions read as follows:

**§ 63.9642 What records must I keep?**

(a) You must keep the records listed in paragraphs (a)(1) through (6) of this section.

* * * * *

(4) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure record the date, time, the cause and duration of each failure.

(5) For each failure to meet an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(6) Record actions taken in accordance with the general duty requirements to minimize emissions in § 63.9600(a) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(b) * * *

(3) Previous (that is, superseded) versions of the performance evaluation plan as required in § 63.9632(b)(5), with the program of corrective action included in the plan required under § 63.8(d)(2).

* * * * *

■ 20. Section 63.9650 is revised to read as follows:

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

Table 2 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.16 apply to you.

■ 21. Section 63.9651 is amended by revising paragraph (c) introductory text and adding paragraph (c)(5) to read as follows:

**§ 63.9651 Who implements and enforces this subpart?**

* * * * *

(c) The authorities that will not be delegated to State, local, or tribal agencies are specified in paragraphs (c)(1) through (5) of this section.

* * * * *

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

■ 22. Section 63.9652 is amended by:

■ a. Removing the definition of "Conveyor belt transfer point".

■ b. Revising the definition of "Deviation".

■ c. Removing the definition of "Wet grinding and milling".

■ d. Adding the definition of "Wet scrubber".

The revision and addition read as follows:

**§ 63.9652 What definitions apply to this subpart?**

* * * * *

*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; or

(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.

* * * * *

*Wet scrubber* means an air pollution control device that removes particulate matter and acid gases from the waste gas stream of stationary sources. The pollutants are removed primarily through the impaction, diffusion, interception and/or absorption of the pollutant onto droplets of liquid. Wet scrubbers include venturi scrubbers, marble bed scrubbers, or impingement scrubbers. For purposes of this subpart, wet scrubbers do not include dynamic wet scrubbers.

■ 23. Table 2 to subpart RRRRR of part 63 is revised to read as follows:

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(a)(1)–(4) | Applicability | Yes. | |
| § 63.1(a)(5) | [Reserved] | No. | |
| § 63.1(a)(6) | Applicability | Yes. | |
| § 63.1(a)(7)–(9) | [Reserved] | No. | |
| § 63.1(a)(10)–(12) | Applicability | Yes. | |
| § 63.1(b)(1) | Initial Applicability Determination | Yes. | |
| § 63.1(b)(2) | [Reserved] | No. | |
| § 63.1(b)(3) | Initial Applicability Determination | Yes. | |
| § 63.1(c)(1)–(2) | Applicability After Standard Established, Permit Requirements. | Yes. | |
| § 63.1(c)(3)–(4) | [Reserved] | No. | |
| § 63.1(c)(5) | Area Source Becomes Major | Yes. | |
| § 63.1(d) | [Reserved] | No. | |
| § 63.1(e) | Equivalency of Permit Limits | Yes. | |
| § 63.2 | Definitions | Yes. | |
| § 63.3(a)–(c) | Units and Abbreviations | Yes. | |
| § 63.4(a)(1)–(2) | Prohibited Activities | Yes. | |
| § 63.4(a)(3)–(5) | [Reserved] | No. | |
| § 63.4(b)–(c) | Circumvention, Fragmentation | Yes. | |
| § 63.5(a)(1)–(2) | Construction/Reconstruction, Applicability. | Yes. | |
| § 63.5(b)(1) | Construction/Reconstruction, Applicability. | Yes. | |
| § 63.5(b)(2) | [Reserved] | No. | |
| § 63.5(b)(3)–(4) | Construction/Reconstruction, Applicability. | Yes. | |
| § 63.5(b)(5) | [Reserved] | No. | |
| § 63.5(b)(6) | Applicability | Yes. | |
| § 63.5(c) | [Reserved] | No. | |
| § 63.5(d)(1)–(4) | Application for Approval of Construction or Reconstruction. | Yes. | |
| § 63.5(e) | Approval of Construction or Reconstruction. | Yes. | |
| § 63.5(f) | Approval Based on State Review | Yes. | |
| § 63.6(a) | Compliance with Standards and Maintenance Requirements. | Yes. | |
| § 63.6(b)(1)–(5) | Compliance Dates for New/Reconstructed Sources. | Yes. | |
| § 63.6(b)(6) | [Reserved] | No. | |
| § 63.6(b)(7) | Compliance Dates for New/Reconstructed Sources. | Yes. | |
| § 63.6(c)(1)–(2) | Compliance Dates for Existing Sources. | Yes. | |
| § 63.6(c)(3)–(4) | [Reserved] | No. | |
| § 63.6(c)(5) | Compliance Dates for Existing Sources. | Yes. | |
| § 63.6(d) | [Reserved] | No. | |
| § 63.6(e)(1)(i) | Operation and Maintenance Requirements—General Duty to Minimize Emissions. | No | See § 63.9600(a) for general duty requirement. |
| § 63.6(e)(1)(ii) | Operation and Maintenance Requirements—Requirement to Correct Malfunction as Soon as Possible. | No. | |
| § 63.6(e)(1)(iii) | Operation and Maintenance Requirements—Enforceability. | Yes. | |
| § 63.6(e)(2) | [Reserved] | No. | |
| § 63.6(e)(3) | Startup, Shutdown, Malfunction (SSM) Plan. | No. | |
| § 63.6(f)(1) | SSM Exemption | No. | |
| § 63.6(f)(2)–(3) | Methods for Determining Compliance | Yes. | |
| § 63.6(g)(1)–(3) | Alternative Nonopacity Standard | Yes. | |
| § 63.6(h) | Compliance with Opacity and Visible Emission (VE) Standards. | No | Opacity limits in subpart RRRRR are established as part of performance testing in order to set operating limits for ESPs. |
| § 63.6(i)(1)–(14) | Extension of Compliance | 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 |
|---|---|---|---|
| § 63.6(i)(15) | [Reserved] | No. | |
| § 63.6(i)(16) | Extension of Compliance | Yes. | |
| § 63.6(j) | Presidential Compliance Exemption | Yes. | |
| § 63.7(a)(1)–(2) | Applicability and Performance Test Dates. | No | Subpart RRRRR specifies performance test applicability and dates. |
| § 63.7(a)(3)–(4) | Performance Testing Requirements | Yes. | |
| § 63.7(b) | Notification | Yes. | |
| § 63.7(c) | Quality Assurance/Test Plan | Yes. | |
| § 63.7(d) | Testing Facilities | Yes. | |
| § 63.7(e)(1) | Conduct of Performance Tests | No | See § 63.9621. |
| § 63.7(e)(2)–(4) | Conduct of Performance Tests | Yes. | |
| § 63.7(f) | Alternative Test Method | Yes. | |
| § 63.7(g) | Data Analysis | Yes | Except this subpart specifies how and when the performance test results are reported. |
| § 63.7(h) | Waiver of Tests | Yes. | |
| § 63.8(a)(1)–(2) | Monitoring Requirements | Yes. | |
| § 63.8(a)(3) | [Reserved] | No. | |
| § 63.8(a)(4) | Additional Monitoring Requirements for Control Devices in § 63.11. | No | Subpart RRRRR does not require flares. |
| § 63.8(b)(1)–(3) | Conduct of Monitoring | Yes. | |
| § 63.8(c)(1)(i) | Operation and Maintenance of CMS | No | See § 63.9632 for operation and maintenance requirements for monitoring. See § 63.9600(a) for general duty requirement. |
| § 63.8(c)(1)(ii) | Spare parts for CMS Equipment | Yes. | |
| § 63.8(c)(1)(iii) | SSM Plan for CMS | No. | |
| § 63.8(c)(2)–(3) | CMS Operation/Maintenance | Yes. | |
| § 63.8(c)(4) | Frequency of Operation for CMS | No | Subpart RRRRR specifies requirements for operation of CMS. |
| § 63.8(c)(5)–(8) | CMS Requirements | Yes | CMS requirements in § 63.8(c)(5) and (6) apply only to COMS for dry electrostatic precipitators. |
| § 63.8(d)(1)–(2) | Monitoring Quality Control | Yes. | |
| § 63.8(d)(3) | Monitoring Quality Control | No | See § 63.9632(b)(5). |
| § 63.8(e) | Performance Evaluation of CMS | Yes. | |
| § 63.8(f)(1)–(5) | Alternative Monitoring Method | Yes. | |
| § 63.8(f)(6) | Relative Accuracy Test Alternative (RATA). | No | Subpart RRRRR does not require continuous emission monitoring systems. |
| § 63.8(g)(1)–(4) | Data Reduction | Yes. | |
| § 63.8(g)(5) | Data That Cannot Be Used | 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) | Recordkeeping and Reporting, Applicability and General Information. | Yes. | |
| § 63.10(b)(1) | General Recordkeeping Requirements. | Yes. | |
| § 63.10(b)(2)(i) | Records of SSM | No | See § 63.9642 for recordkeeping when there is a deviation from a standard. |
| § 63.10(b)(2)(ii) | Recordkeeping of Failures to Meet Standard. | No | See § 63.9642 for recordkeeping of (1) date, time and duration; (2) listing of affected source or equipment, and an estimate of the quantity of each regulated pollutant emitted over the standard; and (3) actions to minimize emissions and correct the failure. |
| § 63.10(b)(2)(iii) | Maintenance Records | Yes. | |
| § 63.10(b)(2)(iv) | Actions Taken to Minimize Emissions During SSM. | No. | |
| § 63.10(b)(2)(v) | Actions Taken to Minimize Emissions During SSM. | No. | |
| § 63.10(b)(2)(vi) | Recordkeeping for CMS Malfunctions | Yes. | |
| § 63.10(b)(2)(vii)–(xii) | Recordkeeping for CMS | Yes. | |
| § 63.10(b)(2)(xiii) | Records for Relative Accuracy Test | No | Subpart RRRRR does not require continuous emission monitoring systems. |
| § 63.10(b)(2)(xiv) | Records for Notification | Yes. | |
| § 63.10(b)(3) | Applicability Determinations | Yes. | |
| § 63.10(c)(1)–(6) | Additional Recordkeeping Requirements for Sources with CMS. | Yes. | |
| § 63.10(c)(7)–(8) | Records of Excess Emissions and Parameter Monitoring Exceedances for CMS. | No | Subpart RRRRR specifies recordkeeping requirements. |
| § 63.10(c)(9) | [Reserved] | No. | |

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 |
|---|---|---|---|
| § 63.10(c)(10)–(14) | CMS Recordkeeping | Yes | |
| § 63.10(c)(15) | Use of SSM Plan | No. | |
| § 63.10(d)(1)–(2) | General Reporting Requirements | Yes | Except this subpart specifies how and when the performance test results are reported. |
| § 63.10(d)(3) | Reporting opacity or VE observations | No | Subpart RRRRR does not have opacity and VE standards that require the use of Method 9 of appendix A–4 to 40 CFR part 60 or Method 22 of appendix A–7 to 40 CFR part 60. |
| § 63.10(d)(5) | SSM Reports | No. See 63.9641 for malfunction reporting requirements. | |
| § 63.10(e) | Additional Reporting Requirements | Yes. | |
| § 63.10(f) | Waiver of Recordkeeping or Reporting Requirements. | Yes. | |
| § 63.11 | Control Device and Work Practice Requirements. | No | Subpart RRRRR does not require flares. |
| § 63.12(a)–(c) | State Authority and Delegations | Yes. | |
| § 63.13(a)–(c) | State/Regional Addresses | Yes. | |
| § 63.14(a)–(t) | Incorporations by Reference | Yes. | |
| § 63.15(a)–(b) | Availability of Information and Confidentiality. | Yes. | |
| § 63.16 | Performance Track Provisions | Yes. | |

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