- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of Section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and
- Does not provide EPA with the discretionary authority to address, as appropriate, disproportionate human health or environmental effects, using practicable and legally permissible methods, under Executive Order 12898 (59 FR 7629, February 16, 1994).

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where EPA or an Indian tribe has demonstrated that a tribe has jurisdiction. In those areas of Indian country, the rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Incorporation by reference, Intergovernmental relations, Volatile organic compounds and Ozone.

Dated: April 25, 2018.

Edward H. Chu,

Acting Regional Administrator, Region 5.

[FR Doc. 2018–09414 Filed 5–2–18; 8:45 am]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA–HQ–OAR–2017–0358; FRL–9977–29–OAR]

RIN 2060–AT66

National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities; Residual Risk and Technology Review

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Friction Materials Manufacturing Facilities source category. The proposed amendments address the results of the residual risk and technology reviews (RTRs) conducted as required under the Clean Air Act (CAA). The proposed amendments also address the startup, shutdown, and malfunction (SSM) provisions of the rule and update the reporting and recordkeeping requirements.

DATES: *Comments.* Comments must be received on or before June 18, 2018. 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 June 4, 2018.

Public Hearing. If a public hearing is requested by May 8, 2018, then we will hold a public hearing on May 18, 2018 at the location described in the **ADDRESSES** section. The last day to pre-register in advance to speak at the public hearing will be May 16, 2018.

ADDRESSES: *Comments.* Submit your comments, identified by Docket ID No. EPA–HQ–OAR–2017–0358, at *http://www.regulations.gov*. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *Regulations.gov*. *Regulations.gov* is our preferred method of receiving comments. However, other submission methods are accepted. To ship or send mail via the United States Postal Service, use the following address: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA–HQ–OAR–2017–0358, Mail Code 28221T, 1200 Pennsylvania Avenue NW, Washington, DC 20460. Use the following Docket Center address if you are using express mail, commercial delivery, hand delivery, or courier: EPA Docket Center, EPA WJC West Building, Room 3334, 1301 Constitution Avenue NW, Washington, DC 20004. Delivery verification signatures will be available only during regular business hours.

Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. See section I.C of this preamble for instructions on submitting CBI.

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 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://www2.epa.gov/dockets/commenting-epa-dockets*.

Public Hearing. If a public hearing is requested, it will be held at EPA's Headquarters, EPA WJC East Building, 1201 Constitution Avenue NW, Washington, DC 20004. If a public hearing is requested, then we will provide details about the public hearing on our website at: *https://www.epa.gov/stationary-sources-air-pollution/friction-materials-manufacturing-facilities-national-emission*. The EPA does not intend to publish another document in the **Federal Register** announcing any updates on the request for a public hearing. Please contact Aimee St. Clair at (919) 541–1063 or by email at *StClair.Aimee@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.

The EPA will make every effort to accommodate all speakers who arrive and register. If a hearing is held at a U.S. government facility, individuals planning to attend should be prepared to show a current, valid state- or federal-approved picture identification to the security staff in order to gain access to the meeting room. An expired form of identification will not be permitted. Please note that the Real ID Act, passed by Congress in 2005, established new requirements for entering federal facilities. If your driver's license is issued by a noncompliant state, you must present an additional form of identification to enter a federal facility. Acceptable alternative forms of identification include: Federal employee badge, passports, enhanced driver's licenses, and military identification cards. Additional information on the Real ID Act is available at *https://www.dhs.gov/real-id-frequently-asked-questions*. In

addition, you will need to obtain a property pass for any personal belongings you bring with you. Upon leaving the building, you will be required to return this property pass to the security desk. No large signs will be allowed in the building, cameras may only be used outside of the building, and demonstrations will not be allowed on federal property for security reasons.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Korbin Smith, Sector Policies and Programs Division (D243–04), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541–2416; fax number: (919) 541–4991; and email address: *smith.korbin@epa.gov*. For specific information regarding the risk modeling methodology, contact James Hirtz, 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) 541–0881; fax number: (919) 541–0840; and email address: *hirtz.james@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact Sara Ayres, Office of Enforcement and Compliance Assurance, U.S. Environmental Protection Agency, EPA WJC South Building (Mail Code 2227A), 1200 Pennsylvania Avenue NW, Washington, DC 20460; telephone number: (312) 353–6266; and email address: *Ayres.Sara@epa.gov*.

SUPPLEMENTARY INFORMATION:

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA–HQ–OAR–2017–0358. All documents in the docket are listed in the *Regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* 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, EPA 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–2017–0358. 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 *http://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 *http://www.regulations.gov* or email. This type of information should be submitted by mail as discussed in section I.C of this preamble. The *http://www.regulations.gov* website is an ''anonymous access'' system, 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 *http://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 disk or CD–ROM 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 *http://www.epa.gov/dockets*.

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
CIIT Chemical Industry Institute of Toxicology
EPA Environmental Protection Agency
ERPG Emergency Response Planning Guideline
FMM friction materials manufacturing
HAP hazardous air pollutant(s)
HCl hydrochloric acid
HEM-3 Human Exposure Model, Version 1.1.0
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
NAICS North American Industry Classification System
NAS National Academy of Sciences
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
ppm parts per million
REL reference exposure level
RFA Regulatory Flexibility Act
RfC reference concentration
RfD reference dose
RTR residual risk and technology review
SAB Science Advisory Board
SSM startup, shutdown, and malfunction
TOSHI target organ-specific hazard index
tpy tons per year
TTN Technology Transfer Network
UF uncertainty factor
UMRA Unfunded Mandates Reform Act
URE unit risk estimate
VCS voluntary consensus standards

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 categories that are 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 standards, 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), the Friction Materials Manufacturing Facilities source category, which for the remainder of this document will be referred to as Friction Materials Manufacturing or FMM, was initially defined as any facility engaged in the manufacture or remanufacture of friction products, including automobile brake linings and disc pads. Hazardous air pollutants (HAP) are emitted from solvents added during the proportioning and mixing of raw materials and the solvents contained in the adhesives used to bond the linings to the brake shoes. Most HAP emissions occur during heated processes such as curing, bonding and debonding processes. The 1992 initial list of identified HAP from friction products facilities were phenol, toluene, methyl chloroform, and methyl ethyl (which is no longer listed as a HAP (see 70 FR 75059, December 19, 2005)). In 2002, the source category definition was amended (see 67 FR 64497, October 18, 2002) to define a FMM facility as a facility that manufactures friction materials using a solvent-based process. Friction materials are used in the manufacture of products used to accelerate or decelerate objects. Products that use friction materials include, but are not limited to, disc brake pucks, disc brake pads, brake linings, brake shoes, brake segments, brake blocks, brake discs, clutch facings, and clutches.

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

Source category	NESHAP	NAICS code [1]
Industry	Friction Materials Manufacturing.	33634, 327999, 333613.

[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 *http://www.epa.gov/stationary-sources-air-pollution/friction-materials-manufacturing-facilities-national-emission*. 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 *http://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–2017–0358).

C. What should I consider as I prepare my comments for the EPA?

Submitting CBI. Do not submit information containing CBI to the EPA through *http://www.regulations.gov* or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on a disk or CD–ROM that you mail to the EPA, mark the outside of the disk or CD–ROM as CBI and then identify electronically within the disk or CD–ROM the specific information that is 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 for inclusion in the public docket. If you submit a CD–ROM or disk that does not contain CBI, mark the outside of the disk or CD–ROM 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–2017–0358.

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 these standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to further 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, *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology,* which is 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) 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). Section 112(f)(2) of the CAA requires the EPA to determine for source categories subject to MACT standards whether promulgation of additional 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 process 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] [*i.e.,* 100-in-1 million].'' 54 FR 38045, September 14, 1989. If risks are unacceptable, the EPA must determine the emissions standards necessary to bring risks 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 ''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. 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 frequently than every 8 years. In conducting this so-called ''technology review,'' the EPA is not required to recalculate the MACT floor. *Natural Resources Defense Council (NRDC)* v. *EPA,* 529 F.3d 1077, 1084 (DC Cir. 2008). *Association of Battery Recyclers, Inc.* v. *EPA,* 716 F.3d 667 (DC Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA 112(d)(6).

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

Only facilities that are major sources of HAP emissions are subject to the FMM NESHAP; area sources of HAP are not subject to the rule. The NESHAP for this source category is codified in 40 CFR part 63, subpart QQQQQ. The HAP emitted by FMM include formaldehyde, methanol, hexane, and phenol. Formaldehyde has the potential to cause chronic cancer and noncancer health effects. The other three HAP are noncarcinogenic and have the potential for chronic and acute noncancer health effects. In 2017, there were two FMM facilities that were subject to the NESHAP.

The affected sources at FMM facilities are the solvent mixing operations as defined in 40 CFR 63.9565. Solvent Mixing Operations are subject to 40 CFR part 63, subpart QQQQQ, emission limits. Current emission limits address large and small solvent mixers. New, reconstructed, and existing large solvent mixers must limit HAP solvent emissions to the atmosphere to no more than 30 percent of that which would otherwise be emitted in the absence of solvent recovery and/or solvent substitution, based on a 7-day block average (see 40 CFR 63.9500(a)). New, reconstructed, and existing small solvent mixers must limit HAP solvent emissions to the atmosphere to no more than 15 percent of that which would otherwise be emitted in the absence of solvent recovery and/or solvent substitution, based on a 7-day block average (see 40 CFR 63.9500(b)).

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

There are two FMM facilities subject to 40 CFR part 63, subpart QQQQQ. The EPA visited both facilities during the development of the NESHAP. We visited Railroad Friction Products Corporation (RFPC) in Maxton, NC, in August 2016, and Knowlton Technologies, LLC, in Watertown, NY,

[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.

in November 2016. During the visits, we discussed quantity and size of solvent mixers at each site and associated emission points, process controls, monitors, unregulated emissions, and other aspects of facility operations. We attached a questionnaire to the site visit letter and discussed the questionnaire during both site visits. We used the information provided by the facilities to help create the modeling file, as well as profile the sector. The site visit reports are documented in the following memoranda, which are available in the docket for this action: ''Site Visit Report-Railroad Friction Products'' and ''Site Visit Report-Knowlton Technologies, LLC.''

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

The EPA used information from the Reasonably Available Control Technology (RACT), Best Available Control Technology (BACT), and Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC) database, reviewed title V permits for each FMM facility, and reviewed regulatory actions related to emissions controls at similar sources that could be applicable to FMM. The EPA reviewed the RBLC to identify potential additional control technologies. No additional control technologies applicable to FMM were found using the RBLC; see sections III.C and IV.C of this preamble and the memorandum, ''Technology Review for the Friction Materials Manufacturing Facilities Source Category,'' which is available in the docket for this action, for further details on this source of information.

III. Analytical Procedures

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

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 process 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 risks within the exposed populations, cancer incidence, and an evaluation of the potential for adverse environmental effects. The scope of the EPA's risk analysis is consistent with the EPA's response to comment 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 noncancer 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 [her] 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 [her] 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 risks. 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 MIR less than the presumptively acceptable level is unacceptable in the light of other health risk factors.'' *Id.* at 38045. 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 those HAP risks 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 risks, 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

[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 exposure to the HAP to the level at or below which no adverse chronic noncancer effects are expected; the HI is the sum of HQs for HAP that affect the same target organ or organ system.

which an individual is exposed may be sufficient to result in 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 is incorporating cumulative risk analyses into its RTR risk assessments, including those reflected in this proposal. The Agency is (1) conducting facility-wide assessments, which include source category emission points, as well as other emission points within the facilities; (2) combining exposures from multiple sources in the same category that could affect the same individuals; and (3) for some persistent and bioaccumulative pollutants, analyzing the ingestion route of exposure. In addition, the RTR risk assessments have always considered aggregate cancer risk from all carcinogens and aggregate noncancer HI from all non-carcinogens affecting the same target organ system.

Although we are interested in placing source category and facility-wide HAP risks in the context of total HAP risks from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Because of the contribution to total HAP risk from emission sources other than those that we have studied in depth during this RTR review, such estimates of total HAP risks 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, in order to inform our decision of whether it is ''necessary'' to revise the emissions standards, we analyze the technical feasibility of applying these developments and the estimated costs, energy implications, and non-air environmental impacts, and we also consider the emission reductions. In addition, we considered 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 (or last updated) the NESHAP, we reviewed a variety of data sources in our investigation of potential practices, processes, or controls to consider. Among the sources we reviewed were the NESHAP for various industries that were promulgated since the MACT standards being reviewed in this action. We reviewed the regulatory requirements and/or technical analyses associated with these regulatory actions to identify any practices, processes, and control technologies considered in these efforts that could be applied to emission sources in the FMM source category, as well as the costs, non-air impacts, and energy implications associated with the use of these technologies. Additionally, we requested information from facilities regarding developments in practices, processes, or control technology. Finally, we reviewed information from other sources, such as state and/or local permitting agency databases and industry-supported databases.

C. How did we estimate post-MACT risks posed by the source category?

The EPA conducted 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 risks within the exposed populations, cancer incidence, and an evaluation of the potential for adverse environmental effects. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this action contains the following document which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Friction Materials Manufacturing Source Category in Support of the February 2018 Risk and Technology Review Proposed Rule*. The methods used to assess risks (as described in the seven primary steps below) are consistent with those peer-reviewed by a panel of the EPA's SAB in 2009 and described in their peer review report issued in 2010; [4] 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?

Solvent mixers are the primary emission source at FMM facilities. Actual emissions for RFPC, which utilizes a solvent recovery system, are estimated using mass balance calculations from the solvent storage tanks. All solvent not recovered is assumed to be emitted.

Potential HAP emissions at Knowlton Technologies, LLC, are captured by a permanent total enclosure and ducted to a boiler for destruction. The potential HAP emissions at Knowlton come from resins/solvents used in the saturator process line, including the resin kitchen. Annual potential emissions of formaldehyde, methanol, and phenol were calculated by using the annual purchasing total of resins/solvents that contain HAP, multiplied by the maximum percent of HAP contained in the resin/solvent to provide a conservative estimate of potential

[3] The EPA's responses to this and all other key recommendations of the SAB's advisory on RTR risk assessment methodologies (which is available at: *http://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EPA-SAB-10-007-unsigned.pdf*) are outlined in a memorandum to this rulemaking docket from David Guinnup titled *EPA's Actions in Response to the Key Recommendations of the SAB Review of RTR Risk Assessment Methodologies*.

[4] U.S. EPA SAB. *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,* May 2010.

emissions. The potential emissions are controlled by a permanent total enclosure with a capture efficiency of 100 percent, which routes the potential emissions to a boiler. Data from emissions testing conducted in January 2003 were used to determine the boiler destruction efficiencies for a select group of organic compounds, including formaldehyde, methanol, and phenol. Pollutant-specific boiler control efficiencies were used to calculate post control device emissions to the atmosphere. Additional details on the data and methods used to develop actual emissions estimates for the risk modeling are provided in the memorandum, ''Development of the Risk Modeling Dataset,'' which is available in the docket for this action.

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 level allowed to be emitted by the MACT standards is referred to as the ''MACT-allowable'' emissions level. We discussed the use 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 RTRs (71 FR 34428, June 14, 2006, and 71 FR 76609, December 21, 2006, respectively). In those actions, we noted that assessing the risks at the MACT-allowable level is inherently reasonable since these risks reflect 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.)

For FMM, we calculated allowable emissions differently for each facility. For RFPC, we determined that allowable emissions are equal to actual emissions because the facility uses both solvent recovery and solvent substitution to comply with the MACT standard. Solvent substitution credits the facility for 100-percent recovery on every batch that doesn't require the use of a HAP solvent. Batch operations using solvent substitution, thus credited for 100-percent recovery, are then averaged with the batches using solvent recovery, to calculate the facility-wide average recovery percentage. That is to say, if the facility ran 10 batches using solvent substitution, credited as 100-percent recovery, and 10 batches using solvent recovery, which achieved 50-percent recovery of the HAP solvent used, the facility would have an average of 75-percent recovery. These calculations show why using the method of calculating allowable emissions by setting them equal to the minimum requirements to comply with the rule (70- percent recovery) does not accurately quantify this source category. The resulting emissions if each facility calculated each batch to emit at 70-percent would result in actual emissions exceeding allowable emissions due to the credited solvent substitution. As a result, we have decided to set actual emissions equal to allowable emissions to better quantify facility emissions. Allowable emissions for Knowlton Technologies, LLC, were calculated by setting the destruction efficiency at 70-percent to comply with the MACT standard instead of the >99-percent currently estimated by the facility. By setting the destruction efficiency to 70-percent, we can estimate the amount of HAP released if the facility were to meet the minimum requirements for compliance with the MACT standard. Additional details on the data and methods used to develop MACT-allowable emissions for the risk modeling are provided in the memorandum, ''Development of the Risk Modeling Dataset,'' which is available in the docket for this action.

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

Both long-term and short-term inhalation exposure concentrations and health risks from the source category addressed in this proposal were estimated using the Human Exposure Model (HEM–3). 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 risks 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.[5] 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[6] 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 risks. These dose-response values are the latest values recommended by the EPA for HAP. They are available at *https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants* and are discussed in more detail later in this section.

b. Risk From Chronic Exposure to HAP That May Cause Cancer

In developing the risk assessment for chronic exposures, we used the estimated annual average ambient air concentrations of each HAP emitted by each source for which we have emissions data in the source category. The air concentrations at each nearby census block centroid were used as a surrogate for the chronic inhalation exposure concentration for all the people who reside in that census block. We calculated the MIR for each facility as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, for a 70-year period) exposure to the maximum concentration at the centroid of inhabited census blocks. Individual cancer risks were calculated by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter) by its unit risk estimate (URE). The URE is an upper bound estimate of an individual's probability of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic

[5] 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).

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

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 the 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.

In 2004, the EPA determined that the Chemical Industry Institute of Toxicology (CIIT) cancer dose-response value for formaldehyde (5.5×10^{-9} milligrams per cubic meter (mg/m^3)) was based on better science than the 1991 IRIS dose-response value (1.3×10^{-5} per mg/m^3) and, we switched from using the IRIS value to the CIIT value in risk assessments supporting regulatory actions. Based on subsequent published research, however, the EPA changed its determination regarding the CIIT model, and, in 2010, the EPA returned to using the 1991 IRIS value. The National Academy of Sciences (NAS) completed its review of the EPA's draft assessment in April of 2011 (*http://www.nap.edu/catalog.php?record id=13142*), and the EPA has been working on revising the formaldehyde assessment. The EPA will follow the NAS Report recommendations and will present results obtained by implementing the biologically based dose response (BBDR) model for formaldehyde. The EPA will compare these estimates with those currently presented in the External Review draft of the assessment and will discuss their strengths and weaknesses. As recommended by the NAS committee, appropriate sensitivity and uncertainty analyses will be an integral component of implementing the BBDR model. The draft IRIS assessment will be revised in response to the NAS peer review and public comments and the final assessment will be posted on the IRIS database. In the interim, we will present findings using the 1991 IRIS value as a primary estimate and may also consider other information as the science evolves.

To estimate incremental individual lifetime cancer risks associated with emissions from the facilities in the source category, the EPA summed the risks for each of the carcinogenic HAP [7] emitted by the modeled sources. Cancer incidence and the distribution of individual cancer risks for the population within 50 km of the sources were also estimated for the source category by summing individual risks. 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.

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

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 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 (*https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary*), 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.'' In cases where an RfC from the EPA's IRIS database 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 obtained 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 (*http://www.atsdr.cdc.gov/mrls/index.asp*); (2) the CalEPA Chronic Reference Exposure Level (REL) (*http://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.

d. 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. We use the peak hourly emission rate,[8] worst-case dispersion conditions, and, in accordance with our mandate under section 112 of the CAA, the point of highest off-site exposure to assess the potential risk to the maximally exposed individual.

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 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.'' [9]

[7] The EPA 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 risks of these individual compounds to obtain the cumulative cancer risks 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 *http://yosemite.epa.gov/sab/sabproduct.nsf/214C6E915BB04E14852570CA007A682C/$File/ecadv02001.pdf.*

[8] 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 default factor (usually 10) to account for variability. This is documented in *Residual Risk Assessment for the Friction Materials Manufacturing Facilities Source Category in Support of the March 2018 Risk and Technology Review Proposed Rule* and in Appendix 5 of the report: *Analysis of Data on Short-term Emission Rates Relative to Long-term Emission Rates.* Both are available in the docket for this rulemaking.

[9] 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,*

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 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.[10] 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 non-sensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.'' Airborne concentrations below AEGL–1 represent exposure levels that can produce mild and progressively increasing, but transient and non-disabling odor, taste, and sensory irritation or certain asymptomatic, non-sensory 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.'' [11] *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, we used the default multiplication factor of 10. While we don't anticipate large variations in hourly emissions, we took a conservative approach to determine if the default multiplication factor would result in high risk. Upon modeling the emissions using the multiplication factor of 10, we determined that risk was still below 1-in-1 million. Due to the low risk results, further research to justify a lower multiplication factor was not necessary.

In our acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP where acute HQs are less than or equal to 1 (even under the conservative assumptions of the screening assessment), and no further analysis is performed for these HAP. In cases where an acute HQ from the screening step is greater than 1, we consider additional site-specific data to develop a more refined estimate of the potential for acute impacts of concern. For this source category, we did not have to perform any refined acute assessments.

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

The EPA conducted 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 determined whether any sources in the source category emitted any HAP known to be persistent and bioaccumulative in the environment (PB–HAP), as identified in the EPA's Air Toxics Risk Assessment Library (available at *http://www2.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library*).

For the FMM source category, we did not identify emissions of any PB–HAP. Because we did not identify PB–HAP emissions, no further evaluation of multipathway risk was conducted for this source category.

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

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

The EPA conducts a screening assessment to examine the potential for adverse environmental effects 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, dioxins/furans, polcyclic organic matter, mercury (both inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are hydrochloric acid (HCl) and hydrogen fluoride (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, were included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, we evaluate the following

The Determination of Acute Reference Exposure Levels for Airborne Toxicants, which is available at *http://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary*.

[10] NAS, 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*).

[11] *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*.

four exposure media: Terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish 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 *Residual Risk Assessment for the Friction Materials Manufacturing Source Category in Support of the Risk and Technology Review February 2018 Proposed Rule,* which is available in the docket for this action.

b. Environmental Risk Screening Methodology

For the environmental risk screening assessment, the EPA first determined whether any of the FMM facilities emitted any of the environmental HAP. For the FMM source category, we did not identify emissions of any of the seven environmental HAP included in the screen. Because we did not identify environmental HAP emissions, no further evaluation of environmental risk was conducted.

6. How did 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 that the EPA compiled from the 2014 National Emissions Inventory (NEI). We used the NEI data for the facility and did not adjust any category or ''non-category'' data. Therefore, there could be differences in the dataset from that used for the source category assessments described in this preamble. We analyzed 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, we made a reasonable attempt to identify the source category risks, and these risks were compared to the facility-wide risks to determine the portion of facility-wide risks that could be attributed to the source category addressed in this proposal. 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 *Residual Risk Assessment for the Friction Materials Manufacturing Source Category in Support of the Risk and Technology Review February 2018 Proposed Rule,* available through the docket for this action, 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 did 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 protective of health and the environment. 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 *Residual Risk Assessment for the FMM Source Category in Support of the Risk and Technology Review February 2018 Proposed Rule,* which is available in the docket for this action.

a. Uncertainties in the RTR Emissions Dataset

Although the development of the RTR emissions dataset involved quality assurance/quality control 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 risks 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 Cancer Guidelines;* 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'' (EPA's *2005 Cancer Guidelines,* pages 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. That is, they represent a ''plausible upper limit to the true value of a quantity'' (although this is usually not a true statistical confidence limit).[12] In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.[13] 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 (U.S. EPA, 1993 and 1994) 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 every effort is made 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 emissions rates, meteorology, and the presence of humans at the location of the maximum concentration. In the acute screening assessment that we conduct under the RTR program, we assume that peak emissions from the source category and worst-case meteorological conditions co-occur, thus, resulting in maximum ambient concentrations. These two events are unlikely to occur at the same time, making these assumptions conservative. We then include the additional

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

[13] 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.

assumption that a person is located at this point during this same time period. For this source category, these assumptions would tend to be worst-case actual exposures as it is unlikely that a person would be located at the point of maximum exposure during the time when peak emissions and worst-case meteorological conditions occur simultaneously.

IV. Analytical Results and Proposed Decisions

A. What are the results of the risk assessment and analyses?

1. Inhalation Risk Assessment Results

The inhalation risk modeling performed to estimate risks based on actual and allowable emissions relied primarily on emissions data gathered through questionnaires provided during two recent site visits conducted by the EPA. The EPA discussed specific FMM processes with authorized representatives of both facilities, including quantity and size of solvent mixers at each site and associated emission points, process controls, monitors, unregulated emissions, and other aspects of facility operations.

The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual and allowable emissions under 40 CFR part 63, subpart QQQQQ, the MIR posed by the source category is less than 1-in-1 million. The total estimated cancer incidence based on actual emission levels is 0.000005 excess cancer cases per year, or 1 case every 200,000 years. The total estimated cancer incidence based on allowable emission levels is 0.00004 excess cancer cases per year, or 1 case every 25,000 years. Air emissions of formaldehyde contributed 100 percent to this cancer incidence. The population exposed to cancer risks greater than or equal to 1-in-1 million considering actual and allowable emissions is 0 (see Table 2 of this preamble).

TABLE 2—INHALATION RISK ASSESSMENT SUMMARY FOR FRICTION MATERIALS MANUFACTURING SOURCE CATEGORY

[40 CFR part 63, subpart QQQQQ]

	Cancer MIR (in 1 million)		Cancer incidence (cases per year)	Population with risk of 1-in-1 million or more	Population with risk of 10-in-1 million or more	Max chronic noncancer HI (actuals and allowables)
	Based on actual emissions	Based on allowable emissions				
Source Category	< 1 (formaldehyde)	< 1 (formaldehyde)	0.000005	0	0	HI < 1
Whole Facility	5 (hexavalent chromium).		0.0005	2,300	0	HI < 1

The maximum modeled chronic noncancer HI (TOSHI) values for the source category based on actual and allowable emissions are estimated to be 0.01 and 0.02, respectively, with n-hexane emissions from large solvent mixers accounting for 100 percent of the HI.

1. Acute Risk Results

Our screening analysis for worst-case acute impacts based on actual emissions indicates no pollutants exceeding an HQ value of 1 based upon the REL. The acute hourly multiplier utilized a default factor of 10 for all emission processes.

2. Multipathway Risk Screening Results

We did not identify any PB–HAP emissions from this source category. Therefore, we estimate that there is no multipathway risk from HAP emissions from this source category.

3. Environmental Risk Screening Results

We did not identify any PB–HAP or acid gas emissions from this source category. We are unaware of any adverse environmental effect caused by emissions of HAP that are emitted by the FMM source category. Therefore, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

4. Facility-Wide Risk Results

Considering facility-wide emissions at the two plants, the MIR is estimated to be 5-in-1 million driven by hexavalent chromium emissions, and the chronic noncancer TOSHI value is calculated to be <1 driven by emissions of nickel and hexavalent chromium (see Table 2 of this preamble). The above cancer and noncancer risks are driven by emissions from a miscellaneous industrial process that was not able to be classified.

Approximately 2,300 people are estimated to have cancer risks greater than or equal to 1-in-1 million considering whole facility emissions from the two facilities in the source category (see Table 2 of this preamble).

6. 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 FMM source category across different demographic groups within the populations living near the two facilities.[14]

Results of the demographic analysis indicate that, for 3 of the 11 demographic groups, Native American, ages 0–17, and below the poverty level, the percentage of the population living within 5 km of facilities in the source category is greater than the corresponding national percentage for the same demographic groups. When examining the risk levels of those exposed to emissions from FMM facilities, we find that no one is exposed to a cancer risk at or above 1-in-1 million or to a chronic noncancer TOSHI greater than 1.

The methodology and the results of the demographic analysis are presented in a technical report, ''Risk and Technology Review—Analysis of Socio-Economic Factors for Populations Living Near Friction Materials Manufacturing Facilities,'' available in the docket for this action.

[14] Demographic groups included in the analysis are: White, African American, Native American, other races and multiracial, Hispanic or Latino, children 17 years of age and under, adults 18 to 64 years of age, adults 65 years of age and over, adults without a high school diploma, people living below the poverty level, people living two times the poverty level, and linguistically isolated people.

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

1. Risk Acceptability

As noted in section II.A of this preamble, the EPA sets standards under CAA section 112(f)(2) using ''a two-step standard-setting approach, with an analytical first step to determine an 'acceptable risk' that considers all health information, including risk estimation uncertainty, and includes a presumptive limit on MIR of approximately 1-in-10 thousand.'' (54 FR 38045, September 14, 1989).

In this proposal, the EPA estimated risks based on actual and allowable emissions from the FMM source category. As discussed above, we consider our analysis of risk from allowable emissions to be conservative in the sense of possibly over-estimating HAP emissions and their associated risks.

The inhalation cancer risk to the individual most exposed to emissions from sources in the FMM source category is less than 1-in-1 million, based on actual emissions. The estimated incidence of cancer due to inhalation exposure is 0.000005 excess cancer cases per year, or 1 case in 200,000 years, based on actual emissions. For allowable emissions, we also estimate that the inhalation cancer risk to the individual most exposed to emissions from sources in this source category is less than 1-in-1 million. The estimated incidence of cancer due to inhalation exposure is 0.00004 excess cancer cases per year, or one case in every 25,000 years, based on allowable emissions.

The Agency estimates that the maximum chronic noncancer TOSHI from inhalation exposure is 0.01 due to actual emissions and 0.02 due to allowable emissions. The screening assessment of worst-case acute inhalation impacts from worst-case 1-hour emissions indicates that no HAP exceed an acute HQ of 1.

Since no PB–HAP are emitted by this source category, a multipathway risk assessment was not warranted. We did not identify emissions of any of the seven environmental HAP included in our environmental risk screening assessment, and we are unaware of any adverse environmental effects caused by HAP emitted by this source category. Therefore, we do not expect an adverse environmental effect as a result of HAP emissions from this source category.

In determining whether risk is acceptable, the EPA considered all available health information and risk estimation uncertainty, as described above. The results indicate that both the actual and allowable inhalation cancer risks to the individual most exposed are less than 1-in-1 million, well below the presumptive limit of acceptability of 100-in-1 million. The maximum chronic noncancer TOSHI due to inhalation exposures is less than 1 for actual and allowable emissions. Finally, the evaluation of acute noncancer risks was conservative and showed that acute risks are below a level of concern.

Taking into account this information, the EPA proposes that the risk remaining after implementation of the existing MACT standards for the FMM source category is acceptable.

2. Ample Margin of Safety Analysis

Under the ample margin of safety analysis, we evaluated the cost and feasibility of available control technologies and other measures (including the controls, measures, and costs reviewed under the technology review) that could be applied in this source category to further reduce the risks (or potential risks) due to emissions of HAP, considering all of the health risks and other health information considered in the risk acceptability determination described above. In this analysis, we considered the results of the technology review, risk assessment, and other aspects of our MACT rule review to determine whether there are any cost-effective controls or other measures that would reduce emissions further and would be necessary to provide an ample margin of safety to protect public health.

Our risk analysis indicated the risks from the FMM source category are low for both cancer and noncancer health effects, and, therefore, any risk reductions from further available control options would result in minimal health benefits. The options identified include a permanent total enclosure and incinerator (PTEI), which is currently used at Knowlton Technologies, LLC, (Knowlton uses a boiler to function as an incinerator for HAP) and a non-solvent process/reformulation, which is used at RFPC. A combination of the two technologies is not considered to be a realistic control option because a PTEI would not add any additional HAP control if a non-solvent process is used. Therefore, we did not analyze such a combined technology option. We also note that non-solvent process/reformulation is not yet demonstrated for all products, and, therefore, cannot be broadly assumed to be feasible to require. The estimated capital cost to install a PTEI at RFPC using a solvent condenser is $1,612,105, and the estimated annual cost to operate the system is $837,745. We estimate that the PTEI option would achieve a HAP reduction of 228 tons, with a cost effectiveness of $3,700 dollars per ton. The resultant risk reduction would be minimal because the estimated risks are already below levels of concern. A detailed cost breakdown can be found in the memorandum, ''Calculated Cost of PTEI,'' which is located in the docket for this rulemaking.

Cost estimates for installing and operating a non-solvent process/reformulation are based on costs received from RFPC. The mixer and downstream material processing equipment's estimated total capital investment was $2,073,430. Annual cost of operation is approximately $125,000 for electrical cost and $75,000 for maintenance. For more information, see the memorandum, ''Email Correspondence for the Cost of Non-Solvent Mixer RFPC,'' which is available in the docket for this rulemaking. We do not have information that this technology could be applied to other production lines with specific product formulations and performance requirements, and, therefore, we determined that this is not a broadly applicable control that is appropriate for consideration under ample margin of safety. We do note, however, that if the technology could be applied to other productions lines, the resultant risk reduction would be minimal because the estimated risks are already below levels of concern for the industry.

Due to the low level of current risk, the minimal risk reductions that could be achieved with the various control options that we evaluated, and the substantial costs associated with each of the additional control options, as well as the natural progression of industry to move away from HAP containing solvents as acceptable non-HAP formulations are developed, we are proposing that additional emission controls are not necessary to provide an ample margin of safety.

3. Adverse Environmental Effects

We did not identify emissions of any of the seven environmental HAP included in our environmental risk screening, and we are unaware of any adverse environmental effects caused by HAP emitted by this source category. Therefore, we do not expect adverse environmental effects 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.

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

In order to fulfill our obligations under CAA section 112(d)(6), we conducted a technology review to identify developments in practices, processes, and control technologies that reduce HAP emissions and to consider whether the current standards should be revised to reflect any such developments. In conducting our technology review, we utilized the RBLC database, reviewed title V permits for each FMM facility, and reviewed regulatory actions related to emissions controls at similar sources that could be applicable to FMM.

After reviewing information from the sources above, we identified the following developments in control technologies for further evaluation: PTEI, and non-solvent process/reformulation, *i.e.,* the same options we considered for possible ample margin of safety options, discussed above. After identifying options for reducing emissions from FMM, we then evaluated the feasibility, costs, and emissions reductions associated with each of the technologies. Additional information about this determination is documented in the memorandum, ''Technology Review for the Friction Materials Manufacturing Source Category,'' which is available in the docket for this action.

We evaluated the cost of installing a PTEI at RFPC (currently operating a solvent recovery system). The total capital investment for installing a PTEI is described in the Ample Margin of Safety Analysis (section IV.B.2) above. Overall, the estimated cost effectiveness of installing and operating a PTEI is approximately $3,700 per ton of hexane reduced. Furthermore, use of an incinerator would result in increased energy usage and nitrogen oxide emissions. Considering the associated cost per ton of hexane reduction and increased nitrogen oxide emissions associated with the operation of an incinerator, we did not find potentially requiring this technology to be cost effective or necessary under CAA section 112(d)(6).

RFPC is also in the process of removing HAP solvent from its production process. It is accomplishing this through the utilization of a non-solvent process/reformulation. This process change would eventually eliminate the need for HAP solvents and their associated emissions. The ability to use a non-solvent process/reformulation depends primarily on each facility's ability to successfully reformulate products while still meeting the required specifications. Therefore, a change that may be used successfully to reduce HAP emissions at one facility may not work for another facility or for all products at the same facility. We do not consider this process change to be a feasible regulatory alternative or necessary under CAA section 112(d)(6).

Based on the results of the technology review, we conclude, and propose to find, that changes to the FMM emissions limits pursuant to CAA section 112(d)(6) are not necessary. We solicit comment on our proposed decision.

D. What other actions are we proposing?

In addition to the proposed determinations described above, we are proposing some revisions to the rule. We are proposing revisions to the SSM provisions of the MACT rule in order to ensure that they are consistent with the Court's decision in *Sierra Club* v. *EPA,* 551 F. 3d 1019 (D.C. 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.

1. Startup, Shutdown, and Malfunction Requirements

In its 2008 decision in *Sierra Club* v. *EPA,* 551 F.3d 1019 (D.C. 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 40 CFR 63.6(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 CAA section 112 standards apply continuously.

We are proposing the elimination of the SSM exemption in this rule. Consistent with *Sierra Club* v. *EPA,* we are proposing standards in this rule that apply at all times. We are also proposing several revisions to Table 1 to 40 CFR part 63, subpart QQQQQ (the General Provisions Applicability Table), as explained in more detail below. For example, we are proposing to eliminate the incorporation of the General Provisions' requirement that the source develop an SSM plan. We also are proposing to eliminate and revise certain recordkeeping and reporting requirements related to the SSM exemption as further 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 to make the current standards in the rule applicable during SSM periods, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not proposed alternate standards for those periods. The two FMM facilities subject to this rulemaking run their associated control technologies during all periods of operation, including startup and shutdown, allowing them to comply with the emissions standards at all times. The EPA has no reason to believe that emissions are significantly different during periods of startup and shutdown from those during normal operations.

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, processes, 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 CAA 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 CAA 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 operation 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 numerical or work practice standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in a 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 Risk and Technology Review, the EPA established a work practice standard for unique types of malfunction that result in releases from pressure relief devices 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 performing sources. 80 FR 75178, 75211–14 (December 1, 2015). The EPA will consider whether circumstances warrant setting work practice 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.

In the event that a source fails to comply with the applicable CAA section 112 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 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, CAA 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).

2. 40 CFR 63.9505 General Compliance Requirements

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.6(e)(1)(i) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 63.9505 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 63.6(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, startup and shutdown, and malfunction events in describing the general duty. Therefore, the language the EPA is proposing at 40 CFR 63.9505(a) and (c) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.6(e)(1)(ii) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 63.9505.

3. SSM Plan

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.6(e)(3) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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.

4. Compliance With Standards

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.6(f)(1) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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* 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,* the EPA is proposing to revise standards in this rule to apply at all times.

5. Monitoring

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.8(c)(1)(i) and (iii) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' to a ''no.'' The cross-references to the general duty and SSM plan requirements in those paragraphs 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)).

6. 40 CFR 63.9545 What records must I keep?

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(b)(2)(i) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(b)(2)(ii) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 63.9545. 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 63.9545 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 table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(b)(2)(iv) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 63.9545(a)(2).

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(b)(2)(v) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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.

7. 40 CFR 63.9540 What reports must I submit and when?

We are proposing to revise the General Provisions table (Table 1 to 40 CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(d)(5) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' 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 63.9540(b)(4). 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(s) 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 such plans will 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.

We are proposing to revise the General Provisions table (Table 1 to 40

CFR part 63, subpart QQQQQ) entry for 40 CFR 63.10(d)(5)(ii) by changing the ''yes'' in column ''Applies to subpart QQQQQ?'' to a ''no.'' Section 63.10(d)(5)(ii) describes an immediate report for startup, shutdown, and malfunctions when a source fails to meet an applicable standard, but does 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 such plans will no longer be required.

E. What compliance dates are we proposing?

The EPA is proposing that existing affected sources and affected sources that commenced construction or reconstruction on or before May 3, 2018 must comply with all of the amendments no later than 180 days after the effective date of the final rule. (The final action is not expected to be a ''major rule'' as defined by 5 U.S.C. 804(2), so the effective date of the final rule will be the promulgation date as specified in CAA section 112(d)(10)). For existing sources, we are proposing a change that would impact ongoing compliance requirements for 40 CFR part 63, subpart QQQQQ. As discussed elsewhere in this preamble, we are proposing to change the requirements for SSM by removing the exemption from the requirements to meet the standard during SSM periods and by removing the requirement to develop and implement an SSM plan. Our experience with similar industries shows that this sort of regulated facility generally requires a time period of 180 days to read and understand the amended rule requirements; to 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; and to update their operations to reflect the revised requirements. From our assessment of the timeframe needed for compliance with 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 this regulation's revised requirements within 180 days of the regulation's effective date. We solicit comment on this proposed compliance period, and we specifically request submission of information from sources in this source category regarding specific actions that would need to be undertaken to comply with the proposed amended requirements and the time needed to make the adjustments for compliance with them. We note that information provided may result in changes to the proposed compliance date. Affected sources that commence construction or reconstruction after May 3, 2018 must comply with all requirements of the subpart, including the amendments being proposed, no later than the effective date of the final rule or upon startup, whichever is later. All affected facilities would have to continue to meet the current requirements of subpart QQQQQ until the applicable compliance date of the amended rule.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

We anticipate that two FMM facilities currently operating in the United States will be affected by these proposed amendments. The basis of our estimate of affected facilities are provided in the memorandum, ''Identification of Major Sources for the NESHAP for Friction Materials Manufacturing,'' which is available in the docket for this action. We are not currently aware of any planned or potential new or reconstructed FMM facilities.

B. What are the air quality impacts?

We do not anticipate that the proposed amendments to this subpart will impact air quality.

C. What are the cost impacts?

The two existing FMM facilities that would be subject to the proposed amendments would incur a net cost savings due to revised recordkeeping and reporting requirements. Nationwide annual net cost savings associated with the proposed requirements are estimated to be $7,358 in 2016 dollars. For further information on the costs and cost savings associated with the requirements being proposed, see the memorandum, ''FMM Economic Impacts Memo,'' and the document, ''Friction Materials Manufacturing 2018 Supporting Statement,'' which are both available in the docket for this action. We solicit comment on these estimated cost impacts.

D. What are the economic impacts?

As noted earlier, the nationwide annual net cost savings associated with the revised recordkeeping and reporting requirements are estimated to be $7,358 per year. The equivalent annualized value (in 2016 dollars) of these net cost savings over 2019 through 2027 is $6,461 per year when costs are discounted at a 7-percent rate, and $7,381 per year when costs are discounted at a 3-percent rate. This cost savings is not expected to result in changes to business operations, or result in a significant price change of products.

E. What are the benefits?

As discussed above, we do not anticipate the proposed amendments to this subpart to impact air quality.

VI. Request for Comments

We solicit comments on all aspects of 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 information that improves the quality and quantity of 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 *http://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*. 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 available ''improved'' data. When you submit data, we request that you provide documentation of the basis for any revised values. 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–2017–0358 (through the

method described in the **ADDRESSES** section of this preamble).

5. Whether you are providing comments on a single facility or multiple facilities, you need only submit one file. 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 *http://www3.epa.gov/ttn/atw/rrisk/rtrpg.html*.

VIII. Statutory and Executive Order Reviews

Additional information about these statutes and Executive Orders can be found at *http://www2.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 Regulation 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 ICR document that the EPA prepared has been assigned EPA ICR number 2025.08. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

We are proposing changes to the recordkeeping and reporting requirements associated with 40 CFR part 63, subpart QQQQQ, in the form of eliminating the SSM plan and reporting requirements, and increasing reporting requirements for the semiannual report of deviation. We also recalculated the estimated recordkeeping burden for records of SSM to more accurately represent the removal of the SSM exemption, which is discussed in more detail in the memorandum, ''Email Correspondence estimating the cost of SSM reporting with Knowlton Technologies, LLC.''

Respondents/affected entities: The respondents to the recordkeeping and reporting requirements are owners or operators of facilities that produce friction products subject to 40 CFR part 63, subpart QQQQQ.

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

Estimated number of respondents: Two facilities.

Frequency of response: Initially and semiannually.

Total estimated burden: The annual recordkeeping and reporting burden for responding facilities to comply with all of the requirements in the NESHAP, averaged over the 3 years of this ICR, is estimated to be 535 hours (per year). Of these, 115 hours (per year) is the reduced burden to comply with the proposed rule amendments. Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: The annual recordkeeping and reporting cost for responding facilities to comply with all of the requirements in the NESHAP, averaged over the 3 years of this ICR, is estimated to be $35,200 (rounded, per year), including $544 annualized capital or operation and maintenance costs. This results in a decrease of $7,400 (rounded, per year) to comply with the proposed amendments to the rule.

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 June 4, 2018. 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. There are no small entities in this regulated industry.

E. Unfunded Mandates Reform Act (UMRA)

This action does not contain an unfunded mandate of $100 million or more 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 facilities are known to be engaged in the friction material manufacturing industry that would be affected by this action. Thus, Executive Order 13175 does not apply to this action.

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's health and risk assessments are contained in sections III.A and IV.A and B of this preamble.

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. Therefore, the EPA conducted a search to identify potentially applicable voluntary consensus standards. However, the Agency identified no such standards. Therefore, the EPA has decided to continue the use of the weighing procedures based on EPA Method 28 of 40 CFR part 60, appendix A (section 10.1) for weighing of recovered solvent. A thorough summary of the search conducted and results are included in the memorandum titled ''Voluntary Consensus Standard Results for Friction

Materials Manufacturing Facilities Residual Risk and Technology Review,'' which is available in the docket for this action.

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).

The documentation for this decision is contained in section IV.A of this preamble and the technical report, ''Friction Materials Manufacturing Demographic Analysis,'' which is available in the docket for this action.

List of Subjects in 40 CFR Part 63

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

Dated: April 23, 2018.

E. Scott Pruitt,

Administrator.

For the reasons stated in the preamble, the EPA proposes to amend title 40, chapter I, part 63 of the Code of Federal Regulations 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.*

Subpart QQQQQ—National Emission Standards for Hazardous Air Pollutants for Friction Materials Manufacturing Facilities

■ 2. Section 63.9495 is amended by revising paragraphs (a) and (b) and adding paragraph (e) to read as follows:

§ 63.9495 When do I have to comply with this subpart?

(a) If you have an existing solvent mixer, you must comply with each of the requirements for existing sources no later than October 18, 2005, except as otherwise specified at this section and §§ 63.9505, 63.9530, 63.9540, 63.9545, and Table 1 to this subpart.

(b) If you have a new or reconstructed solvent mixer for which construction or reconstruction commenced after October 18, 2002, but before May 4, 2018 you must comply with the requirements for new and reconstructed sources upon initial startup, except as otherwise specified at this section and §§ 63.9505, 63.9530, 63.9540, 63.9545, and Table 1 to this subpart.

* * * * *

(e) Solvent mixers constructed or reconstructed after May 3, 2018 must be in compliance with this subpart at startup or by [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], whichever is later.

■ 3. Revise § 63.9505 to read as follows:

§ 63.9505 What are my general requirements for complying with this subpart?

(a) Before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], for each existing source and each new or reconstructed source for which construction or reconstruction commenced after October 18, 2002, but before May 4, 2018 you must be in compliance with the emission limitations in this subpart at all times, except during periods of startup, shutdown, or malfunction. After [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], for each such source you must be in compliance with the emission limitations in this subpart at all times. For new and reconstructed sources for which construction or reconstruction commenced after May 3, 2018, you must be in compliance with the emissions limitations in this subpart at all times.

(b) Before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], for each existing source, and for each new or reconstructed source for which construction or reconstruction commenced after October 18, 2002, but before May 4, 2018, you must always operate and maintain your affected source, including air pollution control and monitoring equipment, according to the provisions in § 63.6(e)(1)(i). After [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for each such source, and after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for new and reconstructed sources for which construction or reconstruction commended after May 3, 2018, at all times you must 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 you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements 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.

(c) Before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], for each existing source, and for each new or reconstructed source for which construction commenced after October 18, 2002, but before May 14, 2018, you must develop a written startup, shutdown, and malfunction plan according to the provisions in § 63.6(e)(3). For each such source, a startup, shutdown, and malfunction plan is not required after [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER]. No startup, shutdown, and malfunction plan is required for any new or reconstructed source for which construction or reconstruction commenced after May 3, 2018.

■ 4. Section 63.9530 is amended by revising paragraphs (a)(1) and (e) to read as follows:

§ 63.9530 How do I demonstrate continuous compliance with the emission limitation that applies to me?

(a) * * *

(1) For existing sources and for new or reconstructed sources for which construction or reconstruction commenced after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], except for during malfunctions of your weight measurement device and associated repairs, you must collect and record the information required in § 63.9520(a)(1) through (8) at all times that the affected source is operating and record all information needed to document conformance with these requirements. After [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for such sources, and after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for new or reconstructed sources that commenced construction after May 3, 2018, you must collect and record the information required in § 63.9520(a)(1) through (8) at all times that the affected source is operating and record all information

needed to document conformance with these requirements.

* * * * *

(e) For existing sources and for new or reconstructed sources which commenced construction or reconstruction after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], consistent with §§ 63.6(e) and 63.7(e)(1), deviations that occur during a period of startup, shutdown, or malfunction are not violations if you demonstrate to the Administrator's satisfaction that you were operating in accordance with § 63.6(e)(1). The Administrator will determine whether deviations that occur during a period of startup, shutdown, or malfunction are violations, according to the provisions in § 63.6(e). After [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for such sources, and after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for new or reconstructed sources which commence construction or reconstruction after May 3, 2018, all deviations are considered violations.

■ 5. Section 63.9540 is amended by revising paragraphs (b)(4), (c)(2), and (d) to read as follows:

§ 63.9540 What reports must I submit and when?

* * * * *

(b) * * *

(4) For existing sources and for new or reconstructed sources for which construction or reconstruction commenced after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], if you had a startup, shutdown, or malfunction during the reporting period and you took actions consistent with your startup, shutdown, and malfunction plan, the compliance report must include the information in § 63.10(d)(5)(i). A startup, shutdown, and malfunction plan is not required for such sources after [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

* * * * *

(c) * * *

(2) For existing sources and for new or reconstructed sources which commenced construction or reconstruction after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken. After [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for such sources, and after [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018, information on the number of deviations to meet an emission limitation. For each instance, include the date, time, duration, and cause of deviations (including unknown cause, if applicable), as 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, and the corrective action taken.

(d) For existing sources and for new or reconstructed sources which commenced construction or reconstruction after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], if you had a startup, shutdown, or malfunction during the semiannual reporting period that was not consistent with your startup, shutdown, and malfunction plan, you must submit an immediate startup, shutdown, and malfunction report according to the requirements in § 63.10(d)(5)(ii). An immediate startup, shutdown, and malfunction report is not required for such sources after [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

* * * * *

■ 6. Section 63.9545 is amended by revising paragraph (a)(2) and adding paragraph (a)(3) to read as follows:

§ 63.9545 What records must I keep?

(a) * * *

(2) For existing sources and for new or reconstructed sources which commenced construction or reconstruction after October 18, 2002, but before May 4, 2018, before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER], the records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, or malfunction. For such sources, it is not required to keep records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, or malfunction after [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER].

(3) After [DATE OF PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018, and after [DATE 180 DAYS AFTER PUBLICATION OF FINAL RULE IN THE FEDERAL REGISTER] for all other affected sources, in the event that an affected unit fails to meet an applicable standard, record the number of deviations. For each deviation, record the date, time and duration of each deviation.

(i) For each deviation, record and retain cause of deviations (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.

(ii) Record actions taken to minimize emissions in accordance with § 63.9505, and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

* * * * *

■ 7. Table 1 to subpart QQQQQ of part 63 is amended by:

■ a. Removing the entry ''§ 63.6(a)–(c), (e)–(f), (i)–(j)'';

■ b. Adding the entries ''§ 63.6(a)–(c), (i)–(j)'', ''§ 63.6(e)(1)(i)–(ii)'', ''§ 63.6(e)(1)(iii), (e)(2)'', ''§ 63.6(e)(3)'', ''§ 63.6(f)(1)'', and ''§ 63.6(f)(2)–(3)'' in numerical order;

■ c. Removing the entry ''§ 63.8(a)(1)–(2), (b), (c)(1)–(3), (f)(1)–(5)'';

■ d. Adding the entries ''§ 63.8(a)(1)–(2)'', ''§ 63.8(b)'', ''§ 63.8(c)(1)(i), (iii)'', ''§ 63.8(c)(1)(ii), (c)(2), (c)(3)'', and ''§ 63.8(f)(1)–(5)'' in numerical order;

■ e. Removing the entry ''§ 63.10(a), (b), (d)(1), (d)(4)–(5), (e)(3), (f)''; and

■ f. Adding the entries ''§ 63.10(a), (b)(1), (d)(1), (d)(4), (e)(3), (f)'', ''§ 63.10(b)(2)(i), (ii), (iv), (v)'', ''§ 63.10(b)(2)(iii), (vi)–(xiv)'', and ''§ 63.10(d)(5)'' in numerical order.

The revisions and additions read as follows:

TABLE 1 TO SUBPART QQQQQ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQQ

* * * * * * *

Citation	Subject	Applies to subpart QQQQQ?	Explanation
*	* *	* * *	*
§ 63.6(a)–(c), (i)–(j)	Compliance with Standards and Maintenance Requirements.	Yes	
*	* *	* * *	*
§ 63.6(e)(1)(i)–(ii)	SSM Operation and Maintenance Requirements.	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	Subpart QQQQQ requires affected units to meet emissions standards at all times. See § 63.9505 for general duty requirement.
§ 63.6(e)(1)(iii), (e)(2)	Operation and Maintenance.	Yes	
§ 63.6(e)(3)	SSM Plan Requirements	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	Subpart QQQQQ requires affected units to meet emissions standards at all times.
§ 63.6(f)(1)	SSM Exemption	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	Subpart QQQQQ requires affected units to meet emissions standards at all times.
§ 63.6(f)(2)–(3)	Compliance with Non-opacity Emission Standards.	Yes	
*	* *	* * *	*
§ 63.8(a)(1)–(2)	Applicability and Relevant Standards for CMS.	Yes	
*	* *	* * *	*
§ 63.8(b)	Conduct of Monitoring	Yes	
§ 63.8(c)(1)(i)–(iii)	Continuous Monitoring System (CMS) SSM Requirements.	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	
§ 63.8(c)(1)(ii), (c)(2), (c)(3)	CMS Repairs, Operating Paramaters, and Performance Tests.	Yes	
*	* *	* * *	*
§ 63.8(f)(1)–(5)	Alternative Monitoring Procedure.	Yes	
*	* *	* * *	*
§ 63.10(a), (b)(1), (d)(1), (d)(4), (e)(3), (f).	Recordkeeping and Reporting Requirements.	Yes	
*	* *	* * *	*
§ 63.10(b)(2)(i), (ii), (iv), (v)	Recordkeeping for Startup, Shutdown and Malfunction.	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	See § 63.9545 for recordkeeping requirements.
§ 63.10(b)(2)(iii), (vi)–(xiv)	Owner/Operator Recordkeeping Requirements.	Yes	

TABLE 1 TO SUBPART QQQQQ OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART QQQQQ—Continued

Citation	Subject	Applies to subpart QQQQQ?	Explanation
*	*	*	*
§ 63.10(d)(5)	SSM reports	No, for new or reconstructed sources which commenced construction or reconstruction after May 3, 2018. Yes, for all other affected sources before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **Federal Register**], and No thereafter	See § 63.9540 for malfunction reporting requirements.
*	*	*	*

[FR Doc. 2018–09200 Filed 5–2–18; 8:45 am]

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