



6560-50-P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 63

[EPA-HQ-OAR-2017-0662; FRL-9992-56-OAR]

RIN 2060-AT34

National Emission Standards for Hazardous Air Pollutants: Asphalt Processing and Asphalt Roofing Manufacturing 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): Asphalt Processing and Asphalt Roofing Manufacturing. The proposed action presents the results of the residual risk and technology review (RTR) conducted as required under the Clean Air Act (CAA). The EPA is also proposing amendments to correct and clarify regulatory provisions related to emissions during periods of startup, shutdown, and malfunction; add requirements for periodic performance testing; add electronic reporting of performance test results and reports, performance evaluation reports, compliance reports, and Notification of Compliance Status reports; revise monitoring requirements for control devices used to comply with the particulate matter (PM) standards; and include other technical corrections to improve consistency and clarity. Although the proposed amendments are not anticipated to result in reductions in emissions of hazardous air pollutants (HAP), if finalized, they would result in improved compliance and implementation of the rule.

DATES: *Comments.* Comments must be received on or before **[INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. 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 **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

Public Hearing. If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a hearing. Additional information about the hearing, if requested, will be published in a subsequent **Federal Register** document and posted at <https://www.epa.gov/stationary-sources-air-pollution/asphalt-processing-and-asphalt-roofing-manufacturing-national>. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

ADDRESSES: *Comments.* Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2017-0662, at <https://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from Regulations.gov. See **SUPPLEMENTARY INFORMATION** for detail about how the EPA treats submitted comments. Regulations.gov is our preferred method of receiving comments. However, the following other submission methods are also accepted:

- *Email:* a-and-r-docket@epa.gov. Include Docket ID No. EPA-HQ-OAR-2017-0662 in the subject line of the message.
- *Fax:* (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2017-0662.
- *Mail:* 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-2017-0662, Mail Code 28221T, 1200 Pennsylvania Avenue, NW,
Washington, DC 20460.

- *Hand/Courier Delivery:* 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.

FOR FURTHER INFORMATION CONTACT: For questions about this proposed action, contact Tonisha Dawson, Sector Policies and Programs Division (Mail Code D243-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-1454; fax number: (919) 541-4991; and email address: *dawson.tonisha@epa.gov*. For specific information regarding the risk modeling methodology, contact Matthew Woody, Health and Environmental Impacts Division (Mail Code C539-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-1535; fax number: (919) 541-0840; and email address: *woody.matthew@epa.gov*. For information about the applicability of the NESHAP to a particular entity, contact John Cox, Office of Enforcement and Compliance Assurance (OECA), U.S. Environmental Protection Agency, EPA WJC South Building (Mail Code 2221A), 1200 Pennsylvania Avenue, NW, Washington DC 20460; telephone number: (202) 564-1395; and email address: *cox.john@epa.gov*.

SUPPLEMENTARY INFORMATION:

Public hearing. Please contact Ms. Virginia Hunt at (919) 541-0832 or by email at hunt.virginia@epa.gov to request a public hearing, to register to speak at the public hearing, or to inquire as to whether a public hearing will be held.

Docket. The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2017-0662. All documents in the docket are listed in Regulations.gov. Although listed, some information is not publicly available, e.g., Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically in Regulations.gov or in hard copy at the EPA Docket Center, Room 3334, 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-2017-0662. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <https://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <https://www.regulations.gov> or email. This type of information should be submitted by mail as discussed below.

The EPA may publish any comment received to its public docket. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written

comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.*, on the Web, cloud, or other file sharing system). For additional submission methods, the full EPA public comment policy, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit <https://www.epa.gov/dockets/commenting-epa-dockets>.

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

Submitting CBI. Do not submit information containing CBI to the EPA through <https://www.regulations.gov> or email. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on any digital storage media that you mail to the EPA, mark the outside of the digital storage media as CBI and then identify electronically within the digital storage media the specific information that is claimed as CBI. In addition to one complete

version of the comments that includes information claimed as CBI, you must submit a copy of the comments that do not contain the information claimed as CBI directly to the public docket through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2017-0662.

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 |
| APCD | air pollution control device |
| ATSDR | Agency for Toxic Substances and Disease Registry |
| BACT | best available control technology |
| CAA | Clean Air Act |
| CalEPA | California EPA |
| CBI | Confidential Business Information |
| CDX | Central Data Exchange |
| CEDRI | Compliance and Emissions Data Reporting Interface |
| CFR | Code of Federal Regulations |
| ECHO | Enforcement and Compliance History Online |
| EPA | Environmental Protection Agency |
| ERPG | Emergency Response Planning Guideline |

| | |
|-------------------|--|
| ERT | Electronic Reporting Tool |
| GACT | generally available control technologies |
| HAP | hazardous air pollutant(s) |
| HCl | hydrogen chloride |
| HEM-3 | Human Exposure Model, Version 1.1.0 |
| HF | hydrogen fluoride |
| HI | hazard index |
| HQ | hazard quotient |
| IBR | incorporation by reference |
| ICAC | Institute of Clean Air Companies |
| IRIS | Integrated Risk Information System |
| km | kilometer |
| LAER | lowest achievable emission rate |
| MACT | maximum achievable control technology |
| mg/m ³ | milligrams per cubic meter |
| MIR | maximum individual risk |
| NAAQS | National Ambient Air Quality Standards |
| NAICS | North American Industry Classification System |
| NEI | National Emission Inventory |
| NESHAP | national emission standards for hazardous air pollutants |
| NRDC | Natural Resources Defense Council |
| NSR | New Source Review |
| NTTAA | National Technology Transfer and Advancement Act |
| OAQPS | Office of Air Quality Planning and Standards |
| OECA | Office of Enforcement and Compliance Assurance |
| OMB | Office of Management and Budget |
| PB-HAP | hazardous air pollutants known to be persistent and bio-accumulative in the environment |
| PDF | portable document format |
| PM | particulate matter |
| POM | polycyclic organic matter |
| ppm | parts per million |
| PRA | Paperwork Reduction Act |

| | |
|-----------|---|
| RACT | reasonably available control technology |
| RBLC | RACT/BACT/LAER Clearinghouse |
| REL | reference exposure level |
| RFA | Regulatory Flexibility Act |
| RfC | reference concentration |
| RTR | residual risk and technology review |
| SAB | Science Advisory Board |
| SSM | startup, shutdown, and malfunction |
| THC | total hydrocarbons |
| TOSHI | target organ-specific hazard index |
| tpy | tons per year |
| TRIM.FaTE | Total Risk Integrated Methodology. Fate, Transport, and Ecological Exposure Model |
| UF | uncertainty factor |
| UMRA | Unfunded Mandates Reform Act |
| URE | unit risk estimate |
| USGS | U.S. Geological Survey |
| VCS | voluntary consensus standards |

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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) and *Documentation*

for Developing the Initial Source Category List (see EPA-450/3-91-030), the Asphalt Processing source category is any facility engaged in the preparation of asphalt flux at stand-alone asphalt processing facilities, petroleum refineries, and asphalt roofing facilities. Asphalt preparation, called “blowing,” is the oxidation of asphalt flux, achieved by bubbling air through the heated asphalt, to raise the softening point, and to reduce penetration of the oxidized asphalt. An asphalt processing facility includes one or more asphalt flux blowing stills, asphalt flux storage tanks storing asphalt flux intended for processing in the blowing stills, oxidized asphalt storage tanks, and oxidized asphalt loading racks.

As defined in the *Initial List of Categories of Sources Under Section 112(c)(1) of the Clean Air Act Amendments of 1990* (see 57 FR 31576, July 16, 1992) and *Documentation for Developing the Initial Source Category List* (see EPA-450/3-91-030), the Asphalt Roofing Manufacturing source category includes any facility consisting of one or more asphalt roofing manufacturing lines. An asphalt roofing manufacturing line includes the collection of equipment used to manufacture asphalt roofing products through a series of sequential process steps. The equipment that constitutes an asphalt roofing manufacturing line varies depending on the type of substrate used (*i.e.*, organic or inorganic) and the final product manufactured (*e.g.*, roll roofing, laminated shingles). An asphalt roofing manufacturing line can include a saturator (including wet looper), coater, coating mixers, sealant applicators, adhesive applicators, and asphalt storage and process tanks. Both the asphalt processing and asphalt roofing manufacturing categories are covered under one NESHAP because these processes are closely related and are often collocated. For more information about the source categories identified in Table 1 of this preamble, see section II.B of this preamble.

Table 1. NESHAP and Industrial Source Categories Affected by This Proposed Action

| Source category | NESHAP | NAICS code¹ |
|-------------------------------|--|-------------------------------|
| Asphalt Processing | Asphalt Processing and Asphalt Roofing Manufacturing | 324110 |
| Asphalt Roofing Manufacturing | Asphalt Processing and Asphalt Roofing Manufacturing | 324122 |

¹North American Industry Classification System.

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

In addition to being available in the docket, an electronic copy of this action is available on the Internet. Following signature by the EPA Administrator, the EPA will post a copy of this proposed action at <https://www.epa.gov/stationary-sources-air-pollution/asphalt-processing-and-asphalt-roofing-manufacturing-national>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal and key technical documents at this same website. Information on the overall RTR program is available at <https://www3.epa.gov/ttn/atw/rrisk/rtrpg.html>.

A redline version of the regulatory language that incorporates the proposed changes in this action is available in the docket for this action (Docket ID No. EPA-HQ-OAR-2017-0662).

II. Background

A. What is the statutory authority for this action?

The statutory authority for this action is provided by sections 112 and 301 of the CAA, as amended (42 U.S.C. 7401 *et seq.*). Section 112 of the CAA establishes a two-stage regulatory process to develop standards for emissions of HAP from stationary sources. Generally, the first stage involves establishing technology-based standards and the second stage involves evaluating those standards that are based on maximum achievable control technology (MACT) to determine whether additional standards are needed to address any remaining risk associated with HAP emissions. This second stage is commonly referred to as the “residual risk review.” In addition to

the residual risk review, the CAA also requires the EPA to review standards set under CAA section 112 every 8 years to determine if there are “developments in practices, processes, or control technologies” that may be appropriate to incorporate into the standards. This review is commonly referred to as the “technology review.” When the two reviews are combined into a single rulemaking, it is commonly referred to as the “risk and technology review.” The discussion that follows identifies the most relevant statutory sections and briefly explains the contours of the methodology used to implement these statutory requirements. A more comprehensive discussion appears in the document titled *CAA Section 112 Risk and Technology Reviews: Statutory Authority and Methodology*, in the docket for this rulemaking.

In the first stage of the CAA section 112 standard setting process, the EPA promulgates technology-based standards under CAA section 112(d) for categories of sources identified as emitting one or more of the HAP listed in CAA section 112(b). Sources of HAP emissions are either major sources or area sources, and CAA section 112 establishes different requirements for major source standards and area source standards. “Major sources” are those that emit or have the potential to emit 10 tons per year (tpy) or more of a single HAP or 25 tpy or more of any combination of HAP. All other sources are “area sources.” For major sources, CAA section 112(d)(2) provides that the technology-based NESHAP must reflect the maximum degree of emission reductions of HAP achievable (after considering cost, energy requirements, and non-air quality health and environmental impacts). These standards are commonly referred to as MACT standards. CAA section 112(d)(3) also establishes a minimum control level for MACT standards, known as the MACT “floor.” The EPA must also consider control options that are more stringent than the floor. Standards more stringent than the floor are commonly referred to as beyond-the-floor standards. In certain instances, as provided in CAA section 112(h), the EPA may set work

practice standards where it is not feasible to prescribe or enforce a numerical emission standard. For area sources, CAA section 112(d)(5) gives the EPA discretion to set standards based on generally available control technologies or management practices (GACT standards) in lieu of MACT standards.

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

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

CAA section 112(d)(6) separately requires the EPA to review standards promulgated under CAA section 112 and revise them “as necessary (taking into account developments in practices, processes, and control technologies)” no less often than every 8 years. In conducting this review, which we call the “technology review,” the EPA is not required to recalculate the MACT floor. *Natural Resource Defense Council (NRDC) v. EPA*, 529 F.3d 1077, 1084 (D.C.

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.

Cir. 2008). *Association of Battery Recyclers, Inc. v. EPA*, 716 F.3d 667 (D.C. Cir. 2013). The EPA may consider cost in deciding whether to revise the standards pursuant to CAA section 112(d)(6).

B. What are the source categories and how does the current NESHAP regulate their HAP emissions?

The current NESHAP for the Asphalt Processing and Asphalt Roofing Manufacturing source categories was promulgated on April 29, 2003 (68 FR 22975), and codified at 40 CFR part 63, subpart LLLLL. As promulgated in 2003 and further amended on May 17, 2005 (70 FR 28360), the NESHAP prescribes MACT standards for asphalt processing and asphalt roofing manufacturing facilities that are major sources of HAP. The MACT standards establish emission limits for PM and total hydrocarbons (THC) as surrogates for total organic HAP. Sources of HAP emissions regulated by 40 CFR part 63, subpart LLLLL, include the following: each blowing still, asphalt storage tank, and asphalt loading rack at asphalt processing facilities and each coating mixer, coater, saturator, wet looper, asphalt storage tank, and sealant and adhesive applicator at asphalt roofing manufacturing facilities. The main HAP emitted from these sources include hydrogen chloride (HCl) (from blowing stills at asphalt processing facilities that use chlorinated catalysts), methylene chloride, hexane, methyl chloride, formaldehyde, and other organic HAP. More information and details regarding the HAP emitted from these sources are provided in Appendix 1 of the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, in Docket ID No. EPA-HQ-OAR-2017-0662. The MACT standards also limit the opacity and visible emissions from certain saturators, coaters, and asphalt storage tanks.

As of August 1, 2018, there are eight facilities in operation and subject to the MACT standards. Four of the eight facilities are strictly asphalt processing facilities, and the other four operate an asphalt processing facility collocated with an asphalt roofing manufacturing facility. A complete list of facilities that are currently subject to the MACT standards is available in Appendix A of the memorandum titled *Clean Air Act Section 112(d)(6) Review for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662.

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

In June 2017, the EPA issued a request, pursuant to CAA section 114, to collect information from asphalt processing and asphalt roofing manufacturing facilities. This effort focused on gathering comprehensive information about process equipment, control technologies, point and fugitive emissions, and other aspects of facility operations. Companies completed the survey for their facilities and submitted responses to the EPA in September 2017. The information not claimed as CBI by respondents is available in the memorandum titled *Data Received from Clean Air Act Section 114 Request for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662.

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

The EPA used multiple sources of information to support this proposed action. Before developing the final list of affected facilities described in section II.B of this preamble, the EPA's Enforcement and Compliance History Online (ECHO) database was used as a tool to identify potentially affected facilities with asphalt processing and/or asphalt roofing manufacturing operations that are subject to the NESHAP. The ECHO database provides

integrated compliance and enforcement information for approximately 800,000 regulated facilities nationwide.

The 2014 National Emissions Inventory (NEI) database provided facility-specific data and MACT category data that were used with the information received through the CAA section 114 request described in section II.C of this preamble to develop the modeling input file for the risk assessment. The NEI is a database that contains information about sources that emit criteria air pollutants, their precursors, and HAP. The database includes estimates of annual air pollutant emissions from point, nonpoint, and mobile sources in the 50 states, the District of Columbia, Puerto Rico, and the U.S. Virgin Islands. The EPA collects this information and releases an updated version of the NEI database every 3 years. The NEI includes information necessary for conducting risk modeling, including annual HAP emissions estimates from individual emission points at facilities and the related emissions release parameters.

In conducting the technology review, we examined information in the Reasonably Available Control Technology (RACT)/Best Available Control Technology (BACT)/Lowest Achievable Emission Rate (LAER) Clearinghouse (RBLC) to identify technologies in use and determine whether there have been relevant developments in practices, processes, or control technologies. The RBLC is a database that contains case specific information on air pollution technologies that have been required to reduce the emissions of air pollutants from stationary sources. Under EPA's New Source Review (NSR) program, if a facility is planning new construction or a modification that will increase the air emissions by a large amount, an NSR permit must be obtained. This central database promotes the sharing of information among permitting agencies and aids in case-by-case determinations for NSR permits. The EPA also reviewed subsequent air toxic regulatory actions for other source categories and information

from site visits to determine whether there have been developments in practices, processes, or control technologies in the Asphalt Processing and Asphalt Roofing Manufacturing source categories.

III. Analytical Procedures and Decision Making

In this section, we describe the analyses performed to support the proposed decisions for the RTR and other issues addressed in this 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 approach to determine whether or not risks are acceptable and to determine if the standards provide an ample margin of safety to protect public health. As explained in the Benzene NESHAP, “the first step judgment on acceptability cannot be reduced to any single factor” and, thus, “[t]he Administrator believes that the acceptability of risk under section 112 is best judged on the basis of a broad set of health risk measures and information.” 54 FR 38046, September 14, 1989. Similarly, with regard to the ample margin of safety determination, “the Agency again considers all of the health risk and other health information considered in the first step. Beyond that information, additional factors relating to the appropriate level of control will also be considered, including cost and economic impacts of controls, technological feasibility, uncertainties, and any other relevant factors.” *Id.*

The Benzene NESHAP approach provides flexibility regarding factors the EPA may consider in making determinations and how the EPA may weigh those factors for each source categories. The EPA conducts a risk assessment that provides estimates of the MIR posed by the HAP emissions from each source in the source categories, the hazard index (HI) for chronic

exposures to HAP with the potential to cause noncancer health effects, and the hazard quotient (HQ) for acute exposures to HAP with the potential to cause noncancer health effects.² The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The scope of the EPA's risk analysis is consistent with the EPA's response to comments on our policy under the Benzene NESHAP where the EPA explained that:

“[t]he policy chosen by the Administrator permits consideration of multiple measures of health risk. Not only can the MIR figure be considered, but also incidence, the presence of 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 his expertise to assess available data. It also complies with the Congressional intent behind the CAA, which did not exclude the use of any particular measure of public health risk from the EPA's consideration with respect to CAA section 112 regulations, and thereby implicitly permits consideration of any and all measures of health risk which the Administrator, in his judgment, believes are appropriate to determining what will ‘protect the public health’.”

See 54 FR 38057, September 14, 1989. Thus, the level of the MIR is only one factor to be weighed in determining acceptability of risk. The Benzene NESHAP explained that “an MIR of

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.

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

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

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 risk, where pollutant-specific exposure health reference levels (*e.g.*, reference concentrations (RfCs)) are based on the assumption that thresholds exist for adverse health

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

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

Although we are interested in placing source categories and facility-wide HAP risk in the context of total HAP risk from all sources combined in the vicinity of each source, we are concerned about the uncertainties of doing so. Estimates of total HAP risk from emission sources other than those that we have studied in depth during this RTR review would have significantly

³ Recommendations of the SAB RTR Panel are provided in their report, which is available at: [https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/\\$File/EP A-SAB-10-007-unsigned.pdf](https://yosemite.epa.gov/sab/sabproduct.nsf/4AB3966E263D943A8525771F00668381/$File/EP A-SAB-10-007-unsigned.pdf).

greater associated uncertainties than the source categories or facility-wide estimates. Such aggregate or cumulative assessments would compound those uncertainties, making the assessments too unreliable.

B. How do we perform the technology review?

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

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

In addition to reviewing the practices, processes, and control technologies that were considered at the time we originally developed (or last updated) the NESHAP, we review a variety of data sources in our investigation of potential practices, processes, or controls to

consider. See sections II.C and II. D of this preamble for information on the specific data sources that were reviewed as part of the technology review.

C. How do we estimate post-MACT risk posed by the source categories?

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

The EPA conducts a risk assessment that provides estimates of the MIR for cancer posed by the HAP emissions from each source in the source categories, the HI for chronic exposures to HAP with the potential to cause noncancer health effects, and the HQ for acute exposures to HAP with the potential to cause noncancer health effects. The assessment also provides estimates of the distribution of cancer risk within the exposed populations, cancer incidence, and an evaluation of the potential for an adverse environmental effect. The seven sections that follow this paragraph describe how we estimated emissions and conducted the risk assessment. The docket for this rulemaking contains the following document, which provides more information on the risk assessment inputs and models: *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*. The methods used to assess risk (as described in the seven primary steps below) are consistent with those described by the EPA in the document reviewed

by a panel of the EPA's SAB in 2009;⁴ and described in the SAB review report issued in 2010. They are also consistent with the key recommendations contained in that report.

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

For each facility that we determined to be subject to the MACT standards (see section II.B of this preamble), we gathered emissions data from Version 1 of the 2014 NEI. For each NEI record, we reviewed the source classification code and emission unit and process descriptions, and then assigned the record to an emission source type regulated by the MACT standards (*i.e.*, each record identified as an affected source at each facility was labeled adhesive/sealant applicator equipment, asphalt loading rack, asphalt storage tank, blowing still, coater, or coating mixer) or an emission source type not regulated by the MACT standards (*i.e.*, each record that was not identified as an affected source at each facility was labeled non-source category type). The non-source category type emissions sources are units or processes that are co-located at one or more of the asphalt processing or asphalt roofing manufacturing facilities, but are not part of the Asphalt Processing and Asphalt Roofing Manufacturing source categories. For example, some of these asphalt affected sources are co-located with petroleum refinery operations that are part of a different source category (*i.e.*, Petroleum Refineries) which are regulated by different NESHAP (*i.e.*, 40 CFR part 63, subparts CC and UUU).

After we determined which emissions sources were part of the source category, we then examined all the NEI records (excluding non-source category records) and developed lists of HAP that were reported, and, thus, expected to be emitted, for each emission process group in

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

the source category. Using the emissions data from this analysis, we created speciation profiles to gap-fill missing HAP emissions data for facility-specific records.

As part of the CAA section 114 request (see section II.C of this preamble), the EPA asked companies to review (and revise, if necessary) the NEI-based data described above, including emission values, emission release point parameters, coordinates, and emission process group assignments. We used all this information to reevaluate our emission process group assignments for each NEI record in the modeling file. We also used this information to update emission release point parameter data. In other words, we used the CAA section 114 response data wherever possible (in lieu of the data we established using the NEI and gap fill procedures), unless it failed certain quality assurance checks.

For further details on the assumptions and methodologies used to estimate actual emissions and identify the emissions release characteristics, see Appendix 1 of the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule* in Docket ID No. EPA-HQ-OAR-2017-0662.

2. How did we estimate MACT-allowable emissions?

The available emissions data in the RTR emissions dataset include estimates of the mass of HAP emitted during a specified annual time period. These “actual” emission levels are often lower than the emission levels allowed under the requirements of the current MACT standards. The emissions allowed under the MACT standards are referred to as the “MACT-allowable” emissions. We discussed the consideration of both MACT-allowable and actual emissions in the final Coke Oven Batteries RTR (70 FR 19998–19999, April 15, 2005) and in the proposed and final Hazardous Organic NESHAP RTR (71 FR 34428, June 14, 2006, and 71 FR 76609,

December 21, 2006, respectively). In those actions, we noted that assessing the risk at the MACT-allowable level is inherently reasonable since that risk reflects the maximum level facilities could emit and still comply with national emission standards. We also explained that it is reasonable to consider actual emissions, where such data are available, in both steps of the risk analysis, in accordance with the Benzene NESHAP approach. (54 FR 38044, September 14, 1989.)

The Asphalt Processing and Asphalt Roofing Manufacturing NESHAP specifies performance standards (*i.e.*, a THC percent reduction or combustion efficiency requirement) for blowing stills, asphalt loading racks, and asphalt storage tanks at existing, new, and reconstructed asphalt processing facilities; asphalt storage tanks at existing asphalt roofing manufacturing lines; and coaters, saturators, wet loopers, coating mixers, sealant and adhesive applicators, and asphalt storage tanks at new and reconstructed asphalt roofing manufacturing lines. Consequently, the MACT-allowable emissions for all of these emission sources are assumed to be equal to the actual emissions. For coating mixers, saturators, coaters, sealant applicators, and adhesive applicators at existing asphalt roofing manufacturing lines, the NESHAP specifies a production-based MACT-allowable limit (*i.e.*, 0.08 pounds PM per ton of asphalt shingle or mineral-surfaced roll roofing produced basis), but allows owners and operators of these emissions sources the alternative of complying with the performance-based standards applicable to new and reconstructed asphalt roofing manufacturing lines. Based on responses received from the CAA section 114 request (see section II.C of this preamble), most facilities use combustion controls to meet the alternative performance-based standards for existing coating mixers, saturators, coaters, sealant applicators, and adhesive applicators, rather than complying with the numerical production-based standard. Therefore, we decided to treat the performance-

based standard as the applicable standard and used the actual emission levels as a reasonable estimation of the MACT-allowable emissions levels for these emission sources.

For further details on the assumptions and methodologies used to estimate MACT-allowable emissions, see Appendix 1 of the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, in Docket ID No. EPA-HQ-OAR-2017-0662.

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

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

a. Dispersion Modeling

The air dispersion model AERMOD, used by the HEM-3 model, is one of the EPA's preferred models for assessing air pollutant concentrations from industrial facilities.⁶ To perform the dispersion modeling and to develop the preliminary risk estimates, HEM-3 draws on three data libraries. The first is a library of meteorological data, which is used for dispersion

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

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

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 block⁷ internal point locations and populations provides the basis of human exposure calculations (U.S. Census, 2010). In addition, for each census block, the census library includes the elevation and controlling hill height, which are also used in dispersion calculations. A third library of pollutant-specific dose-response values is used to estimate health risk. These are discussed below.

b. Risk from Chronic Exposure to HAP

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

For each facility, we calculate the MIR as the cancer risk associated with a continuous lifetime (24 hours per day, 7 days per week, 52 weeks per year, 70 years) exposure to the maximum concentration at the centroid of each inhabited census block. We calculate individual cancer risk by multiplying the estimated lifetime exposure to the ambient concentration of each HAP (in micrograms per cubic meter) by its unit risk estimate (URE). The URE is an upper-bound estimate of an individual's incremental risk of contracting cancer over a lifetime of exposure to a concentration of 1 microgram of the pollutant per cubic meter of air. For residual

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

risk assessments, we generally use UREs from EPA's Integrated Risk Information System (IRIS). For carcinogenic pollutants without IRIS values, we look to other reputable sources of cancer dose-response values, often using California EPA (CalEPA) UREs, where available. In cases where new, scientifically credible dose-response values have been developed in a manner consistent with EPA guidelines and have undergone a peer review process similar to that used by the EPA, we may use such dose-response values in place of, or in addition to, other values, if appropriate. The pollutant-specific dose-response values used to estimate health risk are available at <https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants>.

To estimate individual lifetime cancer risks associated with exposure to HAP emissions from each facility in the source categories, we sum the risks for each of the carcinogenic HAP⁸ emitted by the modeled facility. We estimate cancer risk at every census block within 50 km of every facility in the source categories. The MIR is the highest individual lifetime cancer risk estimated for any of those census blocks. In addition to calculating the MIR, we estimate the distribution of individual cancer risks for the source categories by summing the number of

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

individuals within 50 km of the sources whose estimated risk falls within a specified risk range. We also estimate annual cancer incidence by multiplying the estimated lifetime cancer risk at each census block by the number of people residing in that block, summing results for all of the census blocks, and then dividing this result by a 70-year lifetime.

To assess the risk of noncancer health effects from chronic exposure to HAP, we calculate either an HQ or a target organ-specific hazard index (TOSHI). We calculate an HQ when a single noncancer HAP is emitted. Where more than one noncancer HAP is emitted, we sum the HQ for each of the HAP that affects a common target organ or target organ system to obtain a TOSHI. The HQ is the estimated exposure divided by the chronic noncancer dose-response value, which is a value selected from one of several sources. The preferred chronic noncancer dose-response value is the EPA RfC, defined as “an estimate (with uncertainty spanning perhaps an order of magnitude) of a continuous inhalation exposure to the human population (including sensitive subgroups) that is likely to be without an appreciable risk of deleterious effects during a lifetime”

(https://iaspub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&vocabName=IRIS%20Glossary). In cases where an RfC from the EPA’s IRIS is not available or where the EPA determines that using a value other than the RfC is appropriate, the chronic noncancer dose-response value can be a value from the following prioritized sources, which define their dose-response values similarly to the EPA: (1) the Agency for Toxic Substances and Disease Registry (ATSDR) Minimum Risk Level (<https://www.atsdr.cdc.gov/mrls/index.asp>); (2) the CalEPA Chronic Reference Exposure Level (REL) (<https://oehha.ca.gov/air/crn/notice-adoption-air-toxics-hot-spots-program-guidance-manual-preparation-health-risk-0>); or (3) as noted above, a scientifically credible dose-response

value that has been developed in a manner consistent with the EPA guidelines and has undergone a peer review process similar to that used by the EPA. The pollutant-specific dose-response values used to estimate health risks are available at <https://www.epa.gov/fera/dose-response-assessment-assessing-health-risks-associated-exposure-hazardous-air-pollutants>.

c. Risk from Acute Exposure to HAP that May Cause Health Effects Other Than Cancer

For each HAP for which appropriate acute inhalation dose-response values are available, the EPA also assesses the potential health risks due to acute exposure. For these assessments, the EPA makes conservative assumptions about emission rates, meteorology, and exposure location. We use the peak hourly emission rate,⁹ 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.

⁹ In the absence of hourly emission data, we develop estimates of maximum hourly emission rates by multiplying the average actual annual emissions rates by a factor (either a category-specific factor or a default factor of 10) to account for variability. This is documented in *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 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.

An acute REL is defined as “the concentration level at or below which no adverse health effects are anticipated for a specified exposure duration.”¹⁰ 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.¹¹ 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/m³ (milligrams per cubic meter)) of a substance above which it is predicted that the general population, including susceptible individuals, could experience notable discomfort, irritation, or certain asymptomatic nonsensory effects. However, the effects are not disabling and are transient and reversible upon cessation of exposure.” The document also notes that “Airborne concentrations below AEGL-1 represent exposure levels that can produce mild and progressively increasing but transient and nondisabling odor, taste,

¹⁰ CalEPA issues acute RELs as part of its Air Toxics Hot Spots Program, and the 1-hour and 8-hour values are documented in *Air Toxics Hot Spots Program Risk Assessment Guidelines, Part I, The Determination of Acute Reference Exposure Levels for Airborne Toxicants*, which is available at <https://oehha.ca.gov/air/general-info/oehha-acute-8-hour-and-chronic-reference-exposure-level-rel-summary>.

¹¹ National Academy of Sciences, 2001. *Standing Operating Procedures for Developing Acute Exposure Levels for Hazardous Chemicals*, page 2. Available at https://www.epa.gov/sites/production/files/2015-09/documents/sop_final_standing_operating_procedures_2001.pdf. Note that the National Advisory Committee for Acute Exposure Guideline Levels for Hazardous Substances ended in October 2011, but the AEGL program continues to operate at the EPA and works with the National Academies to publish final AEGLs (<https://www.epa.gov/aegl>).

and sensory irritation or certain asymptomatic, nonsensory effects.” *Id.* AEGL–2 are defined as “the airborne concentration (expressed as parts per million or milligrams per cubic meter) of a substance above which it is predicted that the general population, including susceptible individuals, could experience irreversible or other serious, long-lasting adverse health effects or an impaired ability to escape.” *Id.*

ERPGs are “developed for emergency planning and are intended as health-based guideline concentrations for single exposures to chemicals.”¹² *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 1 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

¹² *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-%20March%202014%20Revision%20%28Updated%2010-2-2014%29.pdf>.

HQ based on the next highest acute dose-response value (usually the AEGL-1 and/or the ERPG-1).

For the acute inhalation risk assessment of the Asphalt Processing and Asphalt Roofing Manufacturing source categories, we did not always use the default acute emissions multiplier of 10. For approximately 65 percent of the modeling file records, we used facility-specific maximum (*i.e.*, acute) hourly emissions from the responses to the CAA section 114 request (see section II.C of this preamble) because these data were available. For the remaining records (excluding asphalt storage tanks), we applied the default acute emissions multiplier of 10. For asphalt storage tanks, we applied a multiplier of four. A further discussion of why these factors were chosen can be found in Appendix 1 of *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, in Docket ID No. EPA-HQ-OAR-2017-0662.

In our acute inhalation screening risk assessment, acute impacts are deemed negligible for HAP for which acute HQs are less than or equal to 1 (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 exposures of concern. For these source categories, the data refinements employed consisted of ensuring the locations where the maximum HQ occurred were off facility property and where the public could potentially be exposed. These refinements are discussed more fully in the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

4. How do 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 categories emitted any PB-HAP, as identified in EPA's Air Toxics Risk Assessment Library (See Volume 1, Appendix D, at <https://www2.epa.gov/fera/risk-assessment-and-modeling-air-toxics-risk-assessment-reference-library>).

For the Asphalt Processing and Asphalt Roofing Manufacturing source categories, we identified PB-HAP emissions of cadmium compounds, lead compounds, mercury compounds, and polycyclic organic matter (POM) (of which polycyclic aromatic hydrocarbons is a subset), so we proceeded to the next step of the evaluation. In this step, we determined whether the facility-specific emission rates of the emitted PB-HAP were large enough to create the potential for significant human health risk through ingestion under reasonable worst-case conditions. To facilitate this step, we used previously developed screening threshold emission rates for several PB-HAP that are based on a hypothetical upper-end screening exposure scenario developed for use in conjunction with the EPA's Total Risk Integrated Methodology. Fate, Transport, and Ecological Exposure (TRIM.FaTE) model. The PB-HAP with screening threshold emission rates are arsenic compounds, cadmium compounds, chlorinated dibenzodioxins and furans, mercury compounds, and POM. Based on the EPA estimates of toxicity and bioaccumulation potential, the pollutants above represent a conservative list for inclusion in multipathway risk assessments for RTR rules. (See Volume 1, Appendix D at https://www.epa.gov/sites/production/files/201308/documents/volume_1_reflibrary.pdf.) In this assessment, we compare the facility-specific emission rates of these PB-HAP to the screening

threshold emission rates for each PB-HAP to assess the potential for significant human health risks via the ingestion pathway. We call this application of the TRIM.FaTE model the Tier 1 screening assessment. The ratio of a facility's actual emission rate to the Tier 1 screening threshold emission rate is a "screening value."

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

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

available, we may conduct a Tier 3 screening assessment. If PB-HAP emission rates do not exceed a Tier 2 screening value of 1, we consider those PB-HAP emissions to pose risks below a level of concern.

There are several analyses that can be included in a Tier 3 screening assessment, depending upon the extent of refinement warranted, including validating that the lakes are fishable, considering plume-rise to estimate emissions lost above the mixing layer, and considering hourly effects of meteorology and plume rise on chemical fate and transport. If the Tier 3 screening assessment indicates that risks above levels of concern cannot be ruled out, the EPA may further refine the screening assessment through a site-specific assessment.

In evaluating the potential multipathway risk from emissions of lead compounds, rather than developing a screening threshold emission rate, we compare maximum estimated chronic inhalation exposure concentrations to the level of the current National Ambient Air Quality Standard (NAAQS) for lead.¹³ Values below the level of the primary (health-based) lead NAAQS are considered to have a low potential for multipathway risk.

For further information on the multipathway assessment approach, see the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in*

¹³ In doing so, the EPA notes that the legal standard for a primary NAAQS—that a standard is requisite to protect public health and provide an adequate margin of safety (CAA section 109(b))—differs from the CAA section 112(f) standard (requiring, among other things, that the standard provide an “ample margin of safety to protect public health”). However, the primary lead NAAQS is a reasonable measure of determining risk acceptability (i.e., the first step of the Benzene NESHAP analysis) since it is designed to protect the most susceptible group in the human population—children, including children living near major lead emitting sources. 73 FR 67002/3; 73 FR 67000/3; 73 FR 67005/1. In addition, applying the level of the primary lead NAAQS at the risk acceptability step is conservative, since that primary lead NAAQS reflects an adequate margin of safety.

Support of the 2018 Risk and Technology Review Proposed Rule, which is available in the docket for this action.

5. How do 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 an adverse environmental effect as required under section 112(f)(2)(A) of the CAA. Section 112(a)(7) of the CAA defines “adverse environmental effect” as “any significant and widespread adverse effect, which may reasonably be anticipated, to wildlife, aquatic life, or other natural resources, including adverse impacts on populations of endangered or threatened species or significant degradation of environmental quality over broad areas.”

The EPA focuses on eight HAP, which are referred to as “environmental HAP,” in its screening assessment: six PB-HAP and two acid gases. The PB-HAP included in the screening assessment are arsenic compounds, cadmium compounds, dioxins/furans, POM, mercury (both inorganic mercury and methyl mercury), and lead compounds. The acid gases included in the screening assessment are 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, are included due to their well-documented potential to cause direct damage to terrestrial plants. In the environmental risk screening assessment, we evaluate the following four exposure media: terrestrial soils, surface water bodies (includes water-column and benthic sediments), fish 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 Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review 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 facilities in the Asphalt Processing and Asphalt Roofing Manufacturing source categories emitted any of the environmental HAP. For the Asphalt Processing and Asphalt Roofing Manufacturing source categories, we identified emissions of cadmium compounds, HCl, lead, mercury, and POM. Because one or more of the environmental HAP evaluated are emitted by at least one facility in the source categories, we proceeded to the second step of the evaluation.

c. PB-HAP Methodology

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

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

evaluated further. If emissions from a facility exceed the Tier 2 screening threshold emission rate, we evaluate the facility further in Tier 3.

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

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

d. Acid Gas Environmental Risk Methodology

The environmental screening assessment for acid gases evaluates the potential phytotoxicity and reduced productivity of plants due to chronic exposure to HF and HCl. The environmental risk screening methodology for acid gases is a single-tier screening assessment

that compares modeled ambient air concentrations (from AERMOD) to the ecological benchmarks for each acid gas. To identify a potential adverse environmental effect (as defined in section 112(a)(7) of the CAA) from emissions of HF and HCl, we evaluate the following metrics: the size of the modeled area around each facility that exceeds the ecological benchmark for each acid gas, in acres and km²; the percentage of the modeled area around each facility that exceeds the ecological benchmark for each acid gas; and the area-weighted average screening value around each facility (calculated by dividing the area-weighted average concentration over the 50-km modeling domain by the ecological benchmark for each acid gas). For further information on the environmental screening assessment approach, see Appendix 9 of the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

6. How do we conduct facility-wide assessments?

To put the source categories 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 categories’ emission points of interest, but also emissions of HAP from all other emission sources at the facility for which we have data. For these source categories, we conducted the facility-wide assessment using a dataset compiled from the 2014 NEI. The source category records of that NEI dataset were removed, evaluated, and updated as described in section II.C of this preamble: What data collection activities were conducted to support this action? Once a quality assured source category dataset was available, it was placed back with the remaining records from the NEI for that facility. The facility-wide file was then used to analyze risks due to

the inhalation of HAP that are emitted “facility-wide” for the populations residing within 50 km of each facility, consistent with the methods used for the source category analysis described above. For these facility-wide risk analyses, the modeled source category risks were compared to the facility-wide risks to determine the portion of the facility-wide risks that could be attributed to the source categories 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 Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review 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 categories contribution to facility-wide risks.

7. How do we consider uncertainties in risk assessment?

Uncertainty and the potential for bias are inherent in all risk assessments, including those performed for this proposal. Although uncertainty exists, we believe that our approach, which used conservative tools and assumptions, ensures that our decisions are health and environmentally protective. A brief discussion of the uncertainties in the RTR emissions dataset, dispersion modeling, inhalation exposure estimates, and dose-response relationships follows below. Also included are those uncertainties specific to our acute screening assessments, multipathway screening assessments, and our environmental risk screening assessments. A more thorough discussion of these uncertainties is included in the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, which is available in the docket for this action. If a multipathway site-specific assessment was performed for these source categories, a

full discussion of the uncertainties associated with that assessment can be found in Appendix 11 of that document, *Site-Specific Human Health Multipathway Residual Risk Assessment Report*.

a. Uncertainties in the RTR Emissions Dataset

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

b. Uncertainties in Dispersion Modeling

We recognize there is uncertainty in ambient concentration estimates associated with any model, including the EPA's recommended regulatory dispersion model, AERMOD. In using a model to estimate ambient pollutant concentrations, the user chooses certain options to apply. For RTR assessments, we select some model options that have the potential to overestimate ambient air concentrations (*e.g.*, not including plume depletion or pollutant transformation). We select other model options that have the potential to underestimate ambient impacts (*e.g.*, not including building downwash). Other options that we select have the potential to either under- or overestimate ambient levels (*e.g.*, meteorology and receptor locations). On balance, considering the directional nature of the uncertainties commonly present in ambient concentrations estimated

by dispersion models, the approach we apply in the RTR assessments should yield unbiased estimates of ambient HAP concentrations. We also note that the selection of meteorology dataset location could have an impact on the risk estimates. As we continue to update and expand our library of meteorological station data used in our risk assessments, we expect to reduce this variability.

c. Uncertainties in Inhalation Exposure Assessment

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

d. Uncertainties in Dose-Response Relationships

There are uncertainties inherent in the development of the dose-response values used in our risk assessments for cancer effects from chronic exposures and noncancer effects from both chronic and acute exposures. Some uncertainties are generally expressed quantitatively, and

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

Cancer UREs used in our risk assessments are those that have been developed to generally provide an upper bound estimate of risk.¹⁴ 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). In some circumstances, the true risk could be as low as zero; however, in other circumstances the risk could be greater.¹⁵ Chronic noncancer RfC and reference dose 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,¹⁶ 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.

¹⁴ IRIS glossary (https://ofmpub.epa.gov/sor_internet/registry/termreg/searchandretrieve/glossariesandkeywordlists/search.do?details=&glossaryName=IRIS%20Glossary).

¹⁵ 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.

¹⁶ See *A Review of the Reference Dose and Reference Concentration Processes*, U.S. EPA, December 2002, and *Methods for Derivation of Inhalation Reference Concentrations and Application of Inhalation Dosimetry*, U.S. EPA, 1994.

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

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

Although we make every effort to identify appropriate human health effect dose-response values for all pollutants emitted by the sources in this risk assessment, some HAP emitted by these source categories 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 unspiciated (*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 categories 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 assumption that a person is located at this point during this same time period. For these source categories, 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.

f. Uncertainties in the Multipathway and Environmental Risk Screening Assessments

For each source categories, we generally rely on site-specific levels of PB-HAP or environmental HAP emissions to determine whether a refined assessment of the impacts from multipathway exposures is necessary or whether it is necessary to perform an environmental screening assessment. This determination is based on the results of a three-tiered screening assessment that relies on the outputs from models—TRIM.FaTE and AERMOD—that estimate environmental pollutant concentrations and human exposures for five PB-HAP (dioxins, POM, mercury, cadmium, and arsenic) and two acid gases (HF and HCl). For lead, we use AERMOD to determine ambient air concentrations, which are then compared to the secondary NAAQS standard for lead. Two important types of uncertainty associated with the use of these models in RTR risk assessments and inherent to any assessment that relies on environmental modeling are model uncertainty and input uncertainty.¹⁷

Model uncertainty concerns whether the model adequately represents the actual processes (e.g., movement and accumulation) that might occur in the environment. For example, does the model adequately describe the movement of a pollutant through the soil? This type of uncertainty

¹⁷ In the context of this discussion, the term “*uncertainty*” as it pertains to exposure and risk encompasses both variability in the range of expected inputs and screening results due to existing spatial, temporal, and other factors, as well as *uncertainty* in being able to accurately estimate the true result.

is difficult to quantify. However, based on feedback received from previous EPA SAB reviews and other reviews, we are confident that the models used in the screening assessments are appropriate and state-of-the-art for the multipathway and environmental screening risk assessments conducted in support of RTR.

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

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

estimates. The assumptions and the associated uncertainties regarding the selected ingestion exposure scenario are the same for all three tiers.

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

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

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

The EPA evaluates the following HAP in the multipathway and/or environmental risk screening assessments, where applicable: arsenic, cadmium, dioxins/furans, lead, mercury (both inorganic and methyl mercury), POM, HCl, and HF. These HAP represent pollutants that can cause adverse impacts either through direct exposure to HAP in the air or through exposure to HAP that are deposited from the air onto soils and surface waters and then through the environment into the food web. These HAP represent those HAP for which we can conduct a

meaningful multipathway or environmental screening risk assessment. For other HAP not included in our screening assessments, the model has not been parameterized such that it can be used for that purpose. In some cases, depending on the HAP, we may not have appropriate multipathway models that allow us to predict the concentration of that pollutant. The EPA acknowledges that other HAP beyond these that we are evaluating may have the potential to cause adverse effects and, therefore, the EPA may evaluate other relevant HAP in the future, as modeling science and resources allow.

IV. Analytical Results and Proposed Decisions

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

As described above, for the Asphalt Processing and Asphalt Roofing Manufacturing source categories, we conducted an inhalation risk assessment for all HAP emitted, a multipathway screening assessment for the PB-HAP emitted, and an environmental risk screening assessment on the PB-HAP and acid gases (*e.g.*, HCl) emitted. We present results of the risk assessment briefly below and in more detail in the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

1. Inhalation Risk Assessment Results

The results of the chronic baseline inhalation cancer risk assessment indicate that, based on estimates of current actual and allowable emissions, the MIR posed by the two asphalt source categories, which were considered together in this analysis, is less than 1-in-1 million. The total estimated cancer incidence based on actual and allowable emission levels is 0.0007 excess cancer cases per year, or 1 case every 1,430 years. 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). In addition, the maximum chronic noncancer HI (TOSHI) is less than 1.

Table 2. Asphalt Processing and Asphalt Roofing Manufacturing Inhalation Risk Assessment Results

| Number of Facilities ¹ | Maximum Individual Cancer Risk (in 1 million) ² | Estimated Population at Increased Risk of Cancer ≥ 1-in-1 Million | Estimated Annual Cancer Incidence (cases per year) | Maximum Chronic Noncancer TOSHI | Maximum Screening Acute Noncancer HQ |
|-----------------------------------|--|---|--|--|--------------------------------------|
| 8 | Based on Actual Emissions Level ^{2,3} | Based on Actual Emissions Level ³ | Based on Actual Emissions Level ³ | Based on Actual Emissions Level ³ | Based on Actual Emissions Level |
| | < 1 | 0 | 0.0007 | 0.1 | HQ _{REL} = 4 (formaldehyde) |

¹ Number of facilities evaluated in the risk analysis.

² Maximum individual excess lifetime cancer risk due to HAP emissions from the source categories.

³ Actual emissions equal allowable emissions; therefore, actual risks equal allowable risks.

2. Acute Risk Results

As presented in Table 2 of this preamble, the acute exposures to emissions from the Asphalt Processing and Asphalt Roofing Manufacturing source categories result in a maximum HQ of 4 based on the REL for formaldehyde. This is driven by emissions from storage tanks. The next highest dose-response value for formaldehyde, the AEGL-1, results in an HQ of 0.3. In addition, acute exposure to acrolein results in an HQ of 2 based on the REL for acrolein. This is driven by emissions from blowing stills. The next highest dose-response value for acrolein, the AEGL1, results in an HQ of 0.09. These results include a refinement performed using aerial photos to ensure the maximum exposure evaluated would occur off-site in areas where the public could be exposed. As described above, the acute REL represents a health-protective level of exposure, with no adverse health effects anticipated below those levels, even for the most sensitive individuals and repeated exposures. As exposure concentration increases above the acute REL, the potential for adverse health effects increases; however, we do not have an acute reference value for a level of exposure at which adverse health effects might be expected.

Therefore, when an REL is exceeded and an AEGL-1 or ERPG-1 level is available (*i.e.*, levels at which mild, reversible effects are anticipated in the general public for a single exposure), we typically use the AEGL-1 and/or ERPG-1 as an additional measure to characterize the risk of adverse health effects. For more detail on the screening level acute risk assessment results, refer to the draft residual risk document: *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, which is available in the docket for this action.

3. Multipathway Risk Screening Results

The multipathway risk screening assessment resulted in a maximum Tier 2 cancer screening value of 2 for POM. The Tier 2 screening values for all other PB-HAP emitted from the source categories (cadmium compounds, lead compounds, and mercury compounds) were less than 1. Based on these results, we are confident that the cancer risks due to multipathway exposures are lower than 2-in-1 million and the noncancer HIs are less than 1.

In the case of lead, the multipathway risks were assessed by comparing modeled ambient lead concentrations against the primary NAAQS for lead. The results of this analysis indicate that based on actual and allowable emissions, the maximum annual off-site ambient lead concentrations are below the primary NAAQS; therefore, we assume there are no multipathway risks due to lead emissions.

4. Environmental Risk Screening Results

The ecological risk screening assessment indicated all modeled points were below the Tier 1 screening threshold based on actual and allowable emissions of PB-HAPs (cadmium compounds, lead compounds, mercury compounds, and POM) and acid gases (HCl) emitted by the source categories.

In the case of lead, the environmental risks were assessed by comparing modeled ambient lead concentrations against the secondary NAAQS for lead. The results of this analysis indicate that, based on actual and allowable emissions, the maximum annual off-site ambient lead concentrations were below the secondary NAAQS; therefore, we conclude there are no environmental risks due to lead emissions.

5. Facility-Wide Risk Results

An assessment of whole-facility risks was performed as described above to characterize the source category risk in the context of whole facility risks.¹⁸ Whole facility risks were estimated using the NEI-based data described in section III.C.1 of this preamble. The maximum lifetime individual cancer risk posed by the eight facilities, based on whole facility emissions, is 9-in-1 million with naphthalene and benzene emissions from facility-wide fugitive emissions and nickel compound emissions from flares from the Petroleum Refinery source category driving the risk. Regarding the noncancer risk assessment, the maximum chronic noncancer HI posed by whole facility emissions is estimated to be 0.1 (for the respiratory system), which occurred at two facilities.

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 categories, 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 Asphalt Processing and Asphalt Roofing Manufacturing source

¹⁸ The facility-wide risk assessment includes all emission points within Asphalt Processing and Asphalt Roofing Manufacturing source categories (including those for which there are no standards), as well as other emission points covered by other NESHAP.

categories across different demographic groups within the populations living near the eight facilities.¹⁹

Results of the demographic analysis indicate that, for six of the 11 demographic groups, African American, Native American, other and multiracial, ages 0–17, ages 18-64, and below the poverty level, the percentage of the population living within 5 km of facilities in the source categories is greater than the corresponding national percentage for the same demographic groups. When examining the risk levels of those exposed to emissions from asphalt processing and asphalt roofing manufacturing 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 Demographic Factors for Populations Living Near Asphalt Processing and Asphalt Roofing Manufacturing Source Categories Operations*, available in the docket for this action.

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

1. Risk Acceptability

We weigh all health risk factors in our risk acceptability determination, including the cancer MIR, the number of persons in various cancer and noncancer risk ranges, cancer incidence, the maximum noncancer TOSHI, the maximum acute noncancer HQ, the extent of

¹⁹ 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.

noncancer risks, the distribution of cancer and noncancer risks in the exposed population, and risk estimation uncertainties (54 FR 38044, September 14, 1989).

For the Asphalt Processing and Asphalt Roofing Manufacturing source categories, the risk analysis indicates that the cancer risk to the individual most exposed is below 1-in-1 million from both actual and allowable emissions. This risk is considerably less than 100-in-1 million, which is the presumptive upper limit of acceptable risk. The risk analysis also estimates a cancer incidence of 0.0007 excess cancer cases per year, or 1 case every 1,430 years, as well a maximum chronic noncancer TOSHI value below 1 (0.1). In addition, the risk assessment indicates no significant potential for multipathway health effects.

The results of the acute screening analysis estimate a maximum acute noncancer HQ of 4 based on the acute REL. To better characterize the potential health risks associated with estimated worst-case acute exposures to HAP, we examine a wider range of available acute health metrics than we do for our chronic risk assessments. This is in acknowledgement that there are generally more data gaps and uncertainties in acute reference values than there are in chronic reference values. By definition, the acute REL represents a health-protective level of exposure, with effects not anticipated below those levels, even for repeated exposures; however, the level of exposure that would cause health effects is not specifically known. As the exposure concentration increases above the acute REL, the potential for effects increases. Therefore, when an REL is exceeded and an AEGL-1 or ERPG-1 level is available (i.e., levels at which mild, reversible effects are anticipated in the general public for a single exposure), we typically use them as an additional comparative measure, as they provide an upper bound for exposure levels above which exposed individuals could experience effects.

Based on the AEGL-1 for formaldehyde, the HQ is less than 1 (0.3), below the level at which mild, reversible adverse effects would be anticipated. In addition, the acute screening assessment includes the conservative (health protective) assumptions that every process releases its peak hourly emissions at the same hour, that the worst-case dispersion conditions occur at that same hour, and that an individual is present at the location of maximum concentration for that hour. Together, these factors lead us to conclude that significant acute effects are not anticipated due to emissions from these categories.

Considering all the health risk information and factors discussed above, including the uncertainties, we propose to find that risks from the Asphalt Processing and Asphalt Roofing Manufacturing source categories are acceptable. As risks for the Asphalt Processing and Asphalt Roofing Manufacturing source categories were assessed together in one risk assessment, and based on the results of that risk assessment, we are proposing risks from the Asphalt Processing source category are acceptable and risks from the Asphalt Roofing Manufacturing source category are 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 these source categories to further reduce the risks (or potential risks) due to emissions of HAP identified in the risk assessment. 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. Although we are proposing that the risks from these source categories are acceptable, the maximum acute risk is an HQ of 4 caused by

formaldehyde emissions from four asphalt storage tanks. There is also an HQ of 2 caused by acrolein emissions from a blowing still. We considered whether the MACT standards applicable to these emission points in particular, as well as all the current MACT standards applicable to these source categories, provide an ample margin of safety to protect public health.

With regard to the sources of acute risks, we identified two options for reducing the acute HQ of 4 due to formaldehyde emissions from asphalt storage tanks: (1) installing ductwork and routing the exhaust of the four asphalt storage tanks to an existing thermal incinerator, or (2) installing ductwork and routing the exhaust of the four asphalt storage tanks to a single new packed bed scrubber. Under these options, the formaldehyde emissions would be reduced by 99.5 percent and 95.0 percent, respectively, and the acute HQ would likely be reduced to less than 1. However, because formaldehyde emissions from asphalt storage tanks are low (*i.e.*, 0.46 tpy formaldehyde is emitted from all asphalt storage tanks in the source categories combined), reduction in the emissions achieved by these two options is not cost effective. We estimate the cost effectiveness to be from \$102,400 per ton of formaldehyde reduced (option 1) to \$3.7 million per ton of formaldehyde reduced (option 2). Installing a packed bed scrubber would also lead to an increase in energy use from the facility. Due to the additional environmental impacts that would be imposed, the small risk reduction, and the substantial costs associated with these options, we are proposing that additional emissions controls for asphalt storage tanks are not necessary to provide an ample margin of safety to protect public health. See the technical memorandum titled *Asphalt Storage Tank Controls – Ample Margin of Safety Analysis*, in Docket ID No. EPA-HQ-OAR-2017-0662 for details.

We did not identify any processes, practices, or control technologies to further reduce organic HAP emissions (including acrolein emissions) from blowing stills (see section IV.C of

this preamble for more details). Therefore, we are proposing that revisions to the current standards for organic HAP for this emission source are not necessary and that acrolein-specific standards for this emission source are also not necessary to provide an ample margin of safety to protect public health.

For other emissions and emissions sources, including asphalt loading racks, coating mixers, saturators (including wet loopers), coaters, sealant applicators, adhesive (lamine) applicators, and HCl emissions from blowing stills, risks are low. Nevertheless, to determine whether it was possible to reduce this already low risk further, we evaluated possible approaches to reduce HAP emissions from these sources.

With regard to HCl emissions, the risk analysis for the Asphalt Processing and Asphalt Roofing Manufacturing source categories includes an assessment of risk from emissions of HCl from blowing stills. As detailed in the *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, four major sources within these source categories reported HCl emissions. The estimated risk associated with HCl emissions is low, less than the source-category maximum HI of 0.1, which is from acrolein emissions, indicating that HCl emissions are not a risk driver under the NESHAP as it currently exists. Nevertheless, we evaluated possible options to further reduce HCl emissions and risks under the ample margin of safety analysis. This evaluation is discussed in more detail in section IV.C of this preamble.

During development of the 2003 NESHAP (68 FR 24562), the EPA evaluated HCl emissions from blowing stills in the Asphalt Processing source category. In the 2003 final rule preamble (68 FR 24562), the EPA explained that for “blowing stills that use chlorinated catalysts, emissions of HCl can be reduced by a gas scrubber using caustic scrubbing media.”

However, EPA did not identify any asphalt processing or asphalt roofing manufacturers that were using scrubbers at that time. In the 2003 preamble, EPA stated that “since gas scrubbing has not been demonstrated as an effective technology for controlling HCl emissions from asphalt processing and due to the potentially high cost per megagram of HCl reduced (\$23,900), the additional cost of going beyond-the-floor was not warranted. Nor is process substitution a viable option for controlling HCl emissions”²⁰ Therefore, in the 2003 final rule preamble, the EPA concluded that “MACT for HCl emissions from blowing stills using catalyst was based on no emission reduction.”

As discussed in detail in section IV.C of this preamble, the EPA again evaluated possible options to reduce HCl emissions, but as in the 2003 rulemaking (68 FR 24562), we did not identify any cost-effective practices, processes, or control technologies to reduce HCl emissions.

For the other emissions sources (*i.e.*, asphalt loading racks, coating mixers, saturators (including wet loopers), coaters, sealant applicators, adhesive (lamine) applicators), we also did not identify any processes, practices, or control technologies that would further reduce emissions and health risks from these sources (see section IV.C of this preamble for more details).

Therefore, we are proposing that additional standards for these emission sources are not necessary to provide an ample margin of safety to protect public health.

²⁰ During development of the 2001 proposed rule (66 FR 58610) and the 2003 final rule (68 FR 24562), the EPA also considered requiring facilities to use non-chlorinated catalysts. However, the EPA determined that the need to use catalyst is driven by the quality of the asphalt feedstocks, which is highly variable. Because the demand for high-quality asphalt flux can sometimes be greater than the supply and because high-quality feedstocks might not be available in a particular geographic region, some roofing manufacturers must accept lower quality feedstock. These sources must use a catalyst in the asphalt flux blowing operation or they cannot produce an acceptable asphalt product for roofing materials. See 66 FR 58610, 58618–19 (November 21, 2001) and 68 FR 24562, 24565 (May 7, 2003).

In summary, due to the low level of current risk, the minimal risk reductions that could be achieved with the control options that we evaluated for asphalt storage tanks and the substantial costs associated with those additional control options, and because we did not identify cost-effective processes, practices, or control technologies that would further reduce emissions and health risks from asphalt loading racks, coating mixers, saturators (including wet loopers), coaters, sealant applicators, adhesive (lamine) applicators, and blowing stills, we are proposing that the current NESHAP provides an ample margin of safety to protect public health.

3. Adverse Environmental Effect

Considering the results of our environmental risk screening, we do not expect an adverse environmental effect as a result of HAP emissions from these source categories, 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?

1. Introduction

In section III.B of this preamble, we describe our typical approach for conducting technology reviews and the types of information we gather and evaluate as part of these reviews. In addition, as we described in the preamble of the Coke Ovens RTR final rule published on April 15, 2005 (70 FR 20009), and in the recent proposed RTR rule for coatings operations titled *National Emission Standards for Hazardous Air Pollutants: Surface Coating of Large Appliances; Printing, Coating, and Dyeing of Fabrics and Other Textiles; and Surface Coating of Metal Furniture Residual Risk and Technology Reviews* published on September 12, 2018 (83 FR 46262), we believe that the results of a CAA section 112(f) risk determination for a CAA section 112(d) standard should be key factors in any subsequent CAA section 112(d)(6)

determination for that standard. In these two previous actions, the agency described potential scenarios where it may not be necessary to revise the standards based on developments in technologies, practices, or processes if the remaining risks associated with HAP emissions from a source category have already been reduced to a level where we have determined further reductions under CAA section 112(f) are not necessary. Under one scenario, if the ample margin of safety analysis for the CAA section 112(f) determination was not based on the availability or cost of particular control technologies, practices, or processes, then advances in air pollution control technology, practices, or processes would not necessarily be a cause to revise the MACT standard pursuant to CAA section 112(d)(6), because the CAA section 112(f) standard (or a CAA section 112(d) standard evaluated pursuant to CAA section 112(f)) would continue to assure an adequate level of safety. Under another scenario, if the ample margin of safety analysis for a CAA section 112(f) standard (or a CAA section 112(d) standard evaluated pursuant to CAA section 112(f)) shows that lifetime excess cancer risk to the individual most exposed to emissions from a source in the category is less than 1-in-1 million, and the remaining risk associated with threshold pollutants falls below a similar threshold of safety, then no further revision under CAA section 112(d)(6) would be necessary, because an ample margin of safety has already been assured.

As described in the risk review sections of this preamble (see sections IV.A and IV.B), the risks due to HAP emissions from the Asphalt Processing and Asphalt Roofing Manufacturing source categories are low. The inhalation cancer MIR is below 1-in-1 million, the maximum inhalation chronic noncancer HI is below 1, and the worst-case maximum inhalation acute HQ is 4 (using the REL for formaldehyde). With regard to multipathway risks, based on a Tier 2 screening assessment, we are confident that the cancer risks due to multipathway exposures are

lower than 2-in-1 million and the noncancer HI is less than 1. Furthermore, as described in our ample margin of safety analysis (see section IV.B of this preamble), we concluded that risks are acceptable and the current NESHAP provides an ample margin of safety to protect public health.

We, therefore, solicit comment on whether revisions to the NESHAP are “necessary,” as that term is used in CAA section 112(d)(6), in situations such as this where the EPA has determined that CAA section 112(d) standards evaluated pursuant to CAA section 112(f) provide an ample margin of safety to protect public health and prevent an adverse environmental effect. In other words, we solicit comment on the conclusion that, if remaining risks associated with air emissions from a source category have already been reduced to levels where we have determined that further reductions are not necessary under CAA section 112(f), then it is not “necessary” to revise the standards based on developments in technologies, practices, or processes under CAA section 112(d)(6). See CAA section 112(d)(6) (“The Administrator shall review, and revise as necessary (taking into account developments in practices, processes, and control technologies), emissions standards promulgated under this section no less often than every 8 years.”).

Though we believe the results of the ample margin of safety analysis may eliminate the need to revise the emissions standards based on developments in technologies, practices, or processes, we nonetheless conducted a technology review to determine whether any developments to further reduce HAP emissions have occurred and to consider whether the current standards should be revised to reflect any such developments.

2. Sources of Emissions and the Information Considered in our Technology Review

Sources of HAP emissions regulated by the NESHAP for the Asphalt Processing and Asphalt Roofing Manufacturing source categories include each blowing still, asphalt loading rack, and asphalt storage tank at asphalt processing facilities and each coating mixer, coater,

saturator, wet looper, asphalt storage tank, and sealant and adhesive applicator at asphalt roofing manufacturing facilities. Pursuant to CAA section 112(d)(6), we conducted a technology review to determine whether any developments have occurred since promulgation of the 2003 NESHAP that may warrant revisions to the current Asphalt Processing and Asphalt Roofing Manufacturing NESHAP.

In conducting our technology review, we used and reviewed the RBLC database, subsequent air toxic regulatory actions for other source categories, information from site visits, and data submitted by facilities in response to the CAA section 114 request (see sections II.C and II.D of this preamble). The findings of our technology review are described below. Further details are provided in the technical memorandum titled *Clean Air Act Section 112(d)(6) Review for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662, which is available in the docket for this proposed rule.

3. Asphalt Loading Racks, Asphalt Storage Tanks, Coating Mixers, Saturators (Including Wet Loopers), Coaters, Sealant Applicators, and Adhesive Applicators

After reviewing information from the aforementioned resources, we did not find any developments (since promulgation of the original NESHAP) in practices, processes, and control technologies that could be applied to asphalt loading racks, asphalt storage tanks, coating mixers, saturators (including wet loopers), coaters, sealant applicators, or adhesive (lamine) applicators and that could be used to reduce emissions from asphalt processing and asphalt roofing manufacturing facilities. We also did not identify any developments in work practices, pollution prevention techniques, or process changes that could achieve emission reductions from these emissions sources.

We determined that the control technologies used to control stack emissions from these emission sources have not changed since the EPA promulgated the NESHAP on April 29, 2003 (68 FR 22975). In general, facilities continue to use combustion technology to control organic HAP emissions from asphalt loading racks and asphalt storage tanks in the Asphalt Processing source category, and facilities in the Asphalt Roofing Manufacturing source category continue to use either combustion technology or PM control devices to control organic HAP emissions from coaters, saturators, wet loopers, coating mixers, sealant and adhesive applicators, and asphalt storage tanks.

In light of the results of the technology review for asphalt loading racks, asphalt storage tanks, coating mixers, saturators (including wet loopers), coaters, sealant applicators, and adhesive (lamine) applicators, we propose to conclude that no revisions to the current standards are necessary for these emission sources pursuant to CAA section 112(d)(6). For further details on the information, assumptions, and methodologies used in this analysis, see the technical memorandum titled *Clean Air Act Section 112(d)(6) Review for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662. We solicit comment on our proposed decision for these emission sources.

4. Blowing Stills

The main HAP emitted from blowing stills are organic HAP (such as formaldehyde, methylene chloride, phenol, POM, toluene) and HCl. We evaluated potential developments in practices, processes, and control technologies for these HAP.

As previously discussed in the proposal for the original 40 CFR part 63, subpart LLLLL, rulemaking standards (66 FR 58610), in asphalt processing, heated asphalt flux is taken from storage and charged to a heated blowing still where air is bubbled up through the flux. This

process raises the softening temperature of the asphalt. The blowing process also decreases the penetration rate of the asphalt when applied to the roofing substrate. Organic HAP volatilize and/or are formed during asphalt processing because of the exothermic oxidation reactions that occur in the blowing still. Facilities use thermal oxidizers to control organic HAP emissions from these sources. We did not identify any developments in practices, processes, or control technologies, nor any developments in work practices, pollution prevention techniques, or process changes to control organic HAP from blowing stills at asphalt processing facilities.

Some processing operations use a catalyst (*e.g.*, ferric chloride, phosphoric acid) in the blowing still that promotes the oxidation of asphalt in the blowing still. The need to use a catalyst is primarily driven by the type of feedstock used (*i.e.*, certain feedstocks require the catalyst to be used to attain desired product specifications). If facilities use a chlorinated catalyst in the blowing still during asphalt processing, then HCl emissions can result from (1) the conversion of ferric chloride catalyst to ferrous chloride in the blowing still, (2) HCl present in the ferric catalyst itself, (3) trace amount of HCl present in the asphalt flux, and (4) oxidation of chlorinated compounds by the blowing still thermal oxidizer.

In addition to assessing developments in practices, processes, and control technologies for organic HAP emitted from blowing stills, the EPA also elected to conduct a technology review for these HCl emissions. Based on the responses to the EPA's CAA section 114 request (see section II.C of this preamble for details about our CAA section 114 request), we determined that none of the 10 existing blowing stills that use a chlorinated catalyst uses an air pollution control device (APCD) to control HCl emissions. However, we identified two potential HCl emission reduction options: (1) installing a packed bed scrubber at the outlet of the blowing still (or at the outlet of the combustion device controlling organic HAP emissions) or (2) installing a

dry sorbent injection and fabric filter at the outlet of the blowing still. Although the EPA previously considered (and rejected) the installation of scrubbers to control HCl emissions from blowing stills under the beyond-the-floor analysis for the original 2001 rulemaking proposal (66 FR 58610),²¹ we identified option 1 as a potential development in practices, processes, and control technologies based on a response received from the CAA section 114 request indicating that one facility uses a caustic scrubber to control hydrogen sulfide (non-HAP) emissions from one of their blowing stills. We believe that while the primary purpose of the caustic scrubber is to reduce hydrogen sulfide emissions, there is also likely a reduction in HCl emissions due to the use of caustic as the scrubbing medium. We identified option 2 as a potential development in practices, processes, and control technologies because it reflects HCl control options used in EPA's New Source Performance Standards and Emission Guidelines for Hospital/Medical/Infectious Waste Incinerators.

Table 3 of this preamble presents the nationwide impacts for the two HCl emission reduction options considered for blowing stills. We estimate the total capital costs for these controls would be about \$7.4 million to \$10.7 million with annualized costs of \$1.4 million to \$2.3 million. Based on available information, only three facilities in the U.S. currently use the chlorinated catalyst. The cost estimates shown in Table 3 reflect the total estimated costs for those three facilities. Therefore, the average capital costs for option 1 would be about \$2,480,000 per facility, the average annualized costs would be about \$500,000 per facility, and the average HCl cost effectiveness would be about \$60,000 per ton. The costs for option 2 are higher.

²¹ The EPA determined in the original 2001 proposal that no facility was using scrubbers to control HCl emissions from blowing stills, and scrubbers were not cost effective for controlling HCl emissions from blowing stills.

Table 3. Nationwide Emissions Reductions and Cost Impacts of Control Options Considered for Blowing Stills at Asphalt Processing Facilities

| Control Option | Total Capital Investment (\$) | Total Annualized Costs (\$/yr) | HCl Emission Reductions (tpy) | HCl Cost Effectiveness (\$/ton) |
|----------------|-------------------------------|--------------------------------|-------------------------------|---------------------------------|
| 1 | 7,436,000 | 1,440,000 | 134 | 10,800 |
| 2 | 10,719,000 | 2,337,000 | 127 | 18,400 |

See the technical memorandum titled *Clean Air Act Section 112(d)(6) Review for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662 for details regarding the information, assumptions, and methodologies used to calculate these estimates. Given that the estimated risks due to HCl emissions are low and based on the relatively high costs per facility for each of the options, we propose to conclude that neither of these options is necessary for reducing HCl emissions from blowing stills that use chlorinated catalysts. In addition, we considered whether it might be feasible for facilities that need to use a catalyst to use non-chlorinated substitute catalysts. However, we did not identify a viable non-chlorinated catalyst substitute. Therefore, in light of the results of the technology review, we are proposing that it is not necessary to promulgate an emissions standard in 40 CFR part 63, subpart LLLLL, for blowing stills pursuant to CAA section 112(d)(6). We solicit comment on our proposed decision.

D. What are the overall results of the risk and technology reviews?

As noted in section IV.B of this preamble, we conclude that risks are acceptable and that the current NESHAP provides an ample margin of safety to protect public health and prevents an adverse environmental effect.

Based on our technology review, we did not identify any developments in practices, processes, or control technologies that warrant revisions to the NESHAP. Therefore, we propose

that no revisions to the NESHAP are necessary pursuant to sections 112(f) or 112(d)(6) of the CAA for HAP emitted from these source categories.

E. What other actions are we proposing?

In addition to the proposed actions described above, we are proposing additional revisions to the NESHAP. We are proposing revisions to the startup, shutdown, and malfunction (SSM) provisions of the MACT rule in order to ensure that they are consistent with the Court decision in *Sierra Club v. EPA*, 551 F.3d 1019 (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. We also are proposing revisions to require electronic reporting of emissions test results and reports, performance evaluation reports, compliance reports, and Notification of Compliance Status reports, to add an option for establishing the maximum pressure drop across a control device used to comply with the PM standards, to add requirements for periodic performance testing, and to clarify text or correct typographical errors, grammatical errors, and cross-reference errors. Our analyses and proposed changes related to these issues are discussed below.

1. SSM 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.

a. Proposed Elimination of the SSM Exemption

We are proposing the elimination of the SSM exemption in this rule, which appears at 40 CFR 63.8685(a), as well as other provisions related to that exemption as discussed below. Consistent with *Sierra Club v. EPA*, we are proposing that the standards in this rule apply at all times. We are proposing several revisions to Table 7 to Subpart LLLLL of Part 63 (the General Provisions Applicability Table, hereafter referred to as the “General Provisions table to subpart LLLLL”) as is explained in more detail below. For example, we are proposing at 40 CFR 63.8685(c) to eliminate the incorporation of the General Provisions’ requirement that the source develop an SSM plan. We are also proposing to make 40 CFR 63.8691(d) no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**, which specifies that deviations during SSM periods are not violations, and to remove the portion of the “deviation” definition in 40 CFR 63.8698 that specifically addresses SSM periods. 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 the removal of the exemptions, the EPA has taken into account startup and shutdown periods and, for the reasons explained below, has not proposed alternate standards for those periods.

We are proposing that startups and shutdowns are normal operation for the Asphalt Processing and Asphalt Roofing Manufacturing source categories; therefore, emissions from startup and shutdown activities must be included when determining if all the standards are being attained. We are proposing at 40 CFR 63.8685(a) that facilities must be in compliance with the

emission limitations (including operating limits) in this subpart “at all times,” except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies. Similar language is also being proposed for 40 CFR 63.8690(b) and 40 CFR 63.8691(b) for monitoring and collecting data, and meeting operating limits, respectively. We are proposing to clarify that the standards and operating limits do not apply “...during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions...” because industry stakeholders requested this clarification in their responses to the CAA section 114 request (see section II.C of this preamble), and this language is used in other MACT standards (*e.g.*, 40 CFR part 63, subpart YY). Furthermore, based on the information we received for control device operations from the responses to the CAA section 114 request (see section II.C of this preamble), we concluded that control devices can be operated normally during periods of startup or shutdown for these source categories. Emission reductions from blowing stills, storage tanks, saturators, wet loopers, coating mixers, sealant applicators, and adhesive applicators are typically achieved by routing vapors to a combustion device (*e.g.*, thermal oxidizer, flare, process heater, or boiler) to meet a THC standard, or to a particulate control device (*e.g.*, high velocity air filter, electrostatic precipitator, or fiberbed filter) to meet a PM standard. In some cases, the facility may need to run a combustion device on supplemental fuel before there are enough volatile organic compounds for the combustion to be (nearly) self-sustaining. It is common practice to start a control device prior to startup of the emissions source it is controlling, so the control device would be operating before emissions are routed to it. We expect control devices would be operating during startup and shutdown events in a manner consistent with normal operating periods, and that these control devices will be operated to maintain and meet the monitoring parameter operating limits

set during the performance test. We do not expect startup and shutdown events to affect emissions from blowing stills, storage tanks, saturators, wet loopers, coating mixers, sealant applicators, or adhesive applicators. Emissions generated during startup and shutdown periods are the same or lower than during steady-state conditions because the amount of feed materials (e.g., asphalt flux or oxidized asphalt) introduced to the process during those periods is lower compared to normal operations. Therefore, if the emission control devices are operated during startup and shutdown, then HAP emissions will be the same or lower than during steady-state operating conditions.

We are also proposing new related language in 40 CFR 63.8685(b) to require that the owner or operator operate and maintain any affected source, including air pollution control equipment and monitoring equipment, at all times to minimize emissions. For example, in the event of an emission capture system or control device malfunction for a controlled operation, to comply with the proposed new language in 40 CFR 63.8685(b), the facility would need to cease the controlled operation as quickly as practicable to ensure that excess emissions during emission capture system and control device malfunctions are minimized. See section IV.E.1.b.i of this preamble for further discussion of this proposed revision.

Periods of startup, normal operations, and shutdown are all predictable and routine aspects of a source's operations. Malfunctions, in contrast, are neither predictable nor routine. Instead, they are, by definition, sudden, infrequent, and not reasonably preventable failures of emissions control, process or monitoring equipment. (40 CFR 63.2) (Definition of malfunction). The EPA interprets CAA section 112 as not requiring emissions that occur during periods of malfunction to be factored into development of CAA section 112 standards, and this reading has been upheld as reasonable by the Court in *U.S. Sugar Corp. v. EPA*, 830 F.3d 579, 606-610

(2016). Under 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 operations of a source. A malfunction is a failure of the source to perform in a “normal or usual manner,” and no statutory language compels the EPA to consider such events in setting CAA section 112 standards.

As the D.C. Circuit recognized in *U.S. Sugar Corp.*, accounting for malfunctions in setting standards would be difficult, if not impossible, given the myriad different types of malfunctions that can occur across all sources in the category, and given the difficulties associated with predicting or accounting for the frequency, degree, and duration of various malfunctions that might occur. *Id.* at 608 (“the EPA would have to conceive of a standard that could apply equally to the wide range of possible boiler malfunctions, ranging from an explosion to minor mechanical defects. Any possible standard is likely to be hopelessly generic to govern such a wide array of circumstances.”). As such, the performance of units that are malfunctioning

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

Although no statutory language compels the EPA to set standards for malfunctions, the EPA has the discretion to do so where feasible. For example, in the Petroleum Refinery Sector RTR, the EPA established a work practice standard for unique types of malfunction that result in releases from pressure relief devices or emergency flaring events because we 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.

It is unlikely that a malfunction in the Asphalt Processing and Asphalt Roofing Manufacturing source categories would result in a violation of the standard. Because a process malfunction could lead to defective products, it would need to be corrected by the operators as quickly as possible to minimize economic losses. Furthermore, a process malfunction would not necessarily lead to an increase in the HAP content of the asphalt flux or oxidized asphalt used in the process, or the amount of HAP emitted from the process. Finally, a malfunction of an emission capture system and control device in which the operator responds by quickly ceasing the associated operation is also unlikely to lead to a violation because compliance is based on a 3-hour average compliance period.

In the unlikely event that a source fails to comply with the applicable CAA section 112(d) standards as a result of a malfunction event, the EPA would determine an appropriate response based on, among other things, the good faith efforts of the source to minimize emissions during malfunction periods, including preventative and corrective actions, as well as

root cause analyses to ascertain and rectify excess emissions. The EPA would also consider whether the source's failure to comply with the CAA section 112(d) standard was, in fact, sudden, infrequent, not reasonably preventable, and was not instead caused in part by poor maintenance or careless operation. 40 CFR 63.2 (definition of malfunction).

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

In summary, the EPA's 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).

b. Proposed Revisions Related to the General Provisions Applicability Table

i. 40 CFR 63.8685(b) General Duty

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.6(e)(1)(i) by changing the "yes" in column 4 to a "no" in which 40 CFR 63.6(e)(1)(i) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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 63.8685(b) 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 for 40 CFR 63.8685(b) does not include that language from 40 CFR 63.6(e)(1).

We are also proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.6(e)(1)(ii) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.6(e)(1)(ii) would be no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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 63.8685(b).

ii. SSM Plan

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.6(e)(3) by changing the “yes” in column 4 to a “no.” Generally, these paragraphs require development of an SSM plan and specify SSM recordkeeping and reporting requirements related to the SSM plan. We are also proposing to make the current provisions at 40 CFR 63.8685(c) requiring the SSM plan to no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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.

iii. Compliance With Standards

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.6(f)(1) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.6(f)(1) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. The current language of 40 CFR 63.6(f)(1) exempts sources from non-opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club v. EPA* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standards apply continuously. Consistent with *Sierra Club v. EPA*, the EPA is proposing to revise standards in this rule to apply at all times.

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.6(h)(1) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.6(h)(1) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. The current language of 40 CFR 63.6(h)(1) exempts sources from opacity standards during periods of SSM. As discussed above, the Court in *Sierra Club v. EPA* vacated the exemptions contained in this provision and held that the CAA requires that some CAA section 112 standards apply continuously. Consistent with *Sierra Club*, the EPA is proposing to revise standards in this rule to apply at all times.

iv. 40 CFR 63.8687 Performance Testing

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.7(e)(1) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.7(e)(1) would no longer be applicable beginning 181 days after publication of the final rule in

the **Federal Register**. We are also proposing to remove a similar requirement at 40 CFR 63.8687(c). Section 63.7(e)(1) describes performance testing requirements. The EPA is instead proposing to add a performance testing requirement at 40 CFR 63.8687(b) applicable beginning 181 days after publication of the final rule in the **Federal Register**. The performance testing requirements we are proposing to add differ from the General Provisions performance testing provisions in several respects. The proposed regulatory text does not include the language in 40 CFR 63.7(e)(1) that restated the SSM exemption and language that precluded startup and shutdown periods from being considered “representative” for purposes of performance testing. The proposed performance testing provisions will not allow performance testing during startup or shutdown. As in 40 CFR 63.7(e)(1), performance tests conducted under this subpart should not be conducted during malfunctions because conditions during malfunctions are often not representative of normal operating conditions. 40 CFR 63.7(e) requires that the owner or operator maintain records of process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. The EPA is proposing at 40 CFR 63.8687(b) to add language clarifying that the owner or operator must make such records available to the Administrator upon request.

v. Monitoring

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.8(c)(1)(i) and (iii) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.8(c)(1)(i) and (iii) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. The cross-references to the general duty and SSM plan requirements in those subparagraphs are not necessary in light of other requirements of 40 CFR

63.8 that require good air pollution control practices (40 CFR 63.8(c)(1)) and that set out the requirements of a quality control program for monitoring equipment (40 CFR 63.8(d)).

vi. 40 CFR 63.8694 Recordkeeping

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.10(b)(2)(i) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.10(b)(2)(i) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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 to subpart LLLLL (Table 7) entry for 40 CFR 63.10(b)(2)(ii) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.10(b)(2)(ii) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. Section 63.10(b)(2)(ii) describes the recordkeeping requirements during a malfunction, requiring a record of “the occurrence and duration of each malfunction.” A similar recordkeeping requirement is already in 40 CFR 63.8694(a)(1), requiring owners and operators to retain a copy of each compliance report; and we are proposing at 40 CFR 63.8693(d) that the compliance report contain, amongst other data elements, a record of “the date, time, and duration” of each deviation from an emission limit, operating limit, opacity limit, and visible emission limit. 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; however, the EPA is proposing that this requirement apply to any failure to meet an applicable standard (*e.g.*, any malfunction that leads to a deviation from an emission limit, operating limit, opacity limit, or visible emission limit) and is requiring that the source record the date, time, and duration of the failure rather than the “occurrence.” For each deviation, the EPA is also proposing to add to 40 CFR 63.8693(d)(4) and (13) a requirement that sources include in their compliance reports (and, therefore, keep records pursuant to 40 CFR 63.8694(a)(1)) 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 emission limitation 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 to subpart LLLLL (Table 7) entry for 40 CFR 63.10(b)(2)(iv) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.10(b)(2)(iv) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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 63.8693(d)(4) (*i.e.*, the requirement to include this information in each compliance report and keep records pursuant to 63.8694(a)(1)).

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.10(b)(2)(v) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.10(b)(2)(v) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. When applicable, the provision requires sources to record actions taken during SSM events to show that actions taken were consistent with their SSM plan. The requirement is no longer appropriate because SSM plans will no longer be required.

We are proposing to make the requirement in 40 CFR 63.8693(d)(4) and at Table 6 to Subpart LLLLL of Part 63 that deviation records specify whether deviations from a standard occurred during a period of SSM (*i.e.*, the requirement to include this information in each compliance report and keep records pursuant to 40 CFR 63.8694(a)(1)) is no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**. This revision is being proposed due to the proposed removal of the SSM exemption and because, as discussed above in this section, we are proposing that deviation records must specify the cause of each deviation, which could include a malfunction period as a cause. We are also proposing to remove the requirement to report the SSM records in 40 CFR 63.6(e)(3)(iii) through (v) by making 40 CFR 63.8694(a)(2) no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**.

vii. 40 CFR 63.8693 Reporting

We are proposing to revise the General Provisions table to subpart LLLLL (Table 7) entry for 40 CFR 63.10(d)(5) by changing the “yes” in column 4 to a “no” in which 40 CFR

63.10(d)(5) would no longer be applicable beginning 181 days after publication of the final rule in the **Federal Register**. 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 63.8693. 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. The rule currently requires reporting of the date and time of each deviation, and a breakdown of the total duration of the deviations by cause. We are clarifying in the rule that the cause of each deviation be reported, and if the cause of a deviation from the standard is unknown, this should be specified in the report. We are also proposing to make a harmonizing change between provisions in the reporting section. In 40 CFR 63.8693(d)(1), (2), and (4), the current rule requires reporting of the “date and time” of periods where a source deviates from a standard; whereas 40 CFR 63.8693(d)(3) requires a record of the “date, time and duration” of periods where a source deviates from a standard. The EPA is proposing to change the terminology in 40 CFR 63.8693(d)(1), (2), and (4) for periods where a source deviates from a standard, to report the “start date, start time, and duration” of the deviation. Note that “date and time” carries the same meaning as “start date, start time, and duration.” We are proposing that the report must also contain the number of deviations from the standard, 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.

Regarding the proposed new requirement discussed above to estimate the quantity of each regulated pollutant emitted over any emission limitation 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 (*e.g.*, asphalt HAP content and application rates, and control efficiencies). 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 plans would no longer be required. The proposed amendments, therefore, eliminate (beginning 181 days after publication of the final rule in the **Federal Register**) the requirement in paragraph 5.d at Table 6 to Subpart LLLLL of Part 63 and 40 CFR 63.8693(c)(4) that requires reporting of whether the source deviated from its SSM plan, including required actions to communicate with the Administrator, and 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 to subpart LLLLL (Table 7) entry for 40 CFR 63.10(d)(5) by changing the “yes” in column 4 to a “no” in which 40 CFR 63.10(d)(5) would no longer be applicable beginning 181 days after publication of the final rule

in the **Federal Register** and remove the requirement in paragraph 6 at Table 6 to Subpart LLLLL of Part 63 for reasons discussed above; and because 40 CFR 63.10(d)(5)(ii) describes an immediate report for startups, shutdowns, and malfunctions when a source failed to meet an applicable standard but, did not follow the SSM plan. We will no longer require owners and operators to report when actions taken during a startup, shutdown, or malfunction were not consistent with an SSM plan, because plans would no longer be required.

We are proposing to make the requirement in 40 CFR 63.8693(d)(4) that deviation reports specify whether deviation from a standard occurred during a period of SSM no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**. This revision is being proposed due to the proposed removal of the SSM exemption and because, as discussed above in this section, we are proposing that deviation reports must specify the cause of each deviation, which could include a malfunction period as a cause. Further, we are proposing to make the requirement in 40 CFR 63.8693(d)(6) that deviation reports must break down the total duration of deviations into those that are due to “startup” and “shutdown” causes no longer applicable beginning 181 days after publication of the final rule in the **Federal Register**. These categories are no longer needed because these periods are proposed to be considered normal operation, as discussed in section IV.E.1.a of this preamble.

2. Electronic Reporting Requirements

Through this proposal, the EPA is proposing that beginning 181 days after publication of the final rule in the **Federal Register**, owners and operators of asphalt processing and asphalt roofing manufacturing facilities submit electronic copies of required performance test reports, performance evaluation reports, compliance reports, and Notification of Compliance Status reports through the EPA’s Central Data Exchange (CDX) using the Compliance and Emissions

Data Reporting Interface (CEDRI). A description of the electronic data submission process is provided in the memorandum titled *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2017-0662. The proposed rule requires that performance test results collected using test methods that are supported by the EPA's Electronic Reporting Tool (ERT) as listed on the ERT website²² at the time of the test be submitted in the format generated through the use of the ERT, and that other performance test results be submitted in portable document format (PDF) using the attachment module of the ERT. Similarly, performance evaluation results of continuous monitoring systems measuring relative accuracy test audit pollutants that are supported by the ERT at the time of the test must be submitted in the format generated through the use of the ERT and other performance evaluation results be submitted in PDF using the attachment module of the ERT.

For compliance reports, the proposed rule requires that owners and operators use the appropriate spreadsheet template to submit information to CEDRI beginning 181 days after publication of the final rule in the **Federal Register**. A draft version of the proposed template for these reports is included in the docket for this rulemaking.²³ The EPA specifically requests comment on the content, layout, and overall design of the template.

Additionally, the EPA has identified two broad circumstances in which electronic reporting extensions may be provided. In both circumstances, the decision to accept the claim of needing additional time to report is within the discretion of the Administrator, and reporting

²² <https://www.epa.gov/electronic-reporting-air-emissions/electronic-reporting-tool-ert>.

²³ See *40_CFR_Part_63_Subpart_LLLLL_Aspphalt_Processing_and_Aspphalt_Roofing_Manufacturing_Semiannual_Spreadsheet_Template_Draft.xlsx*, available at Docket ID No. EPA-HQ-OAR-2017-0662.

should occur as soon as possible. The EPA is providing these potential extensions to protect owners and operators from noncompliance in cases where they cannot successfully submit a report by the reporting deadline for reasons outside of their control. The first situation in which an extension may be warranted is due to outages of the EPA's CDX or CEDRI that precludes an owner or operator from accessing the system and submitting required reports is addressed in 40 CFR 63.8693(h). The second situation is due to a force majeure event, which is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents an owner or operator from complying with the requirement to submit a report electronically as required by this rule is addressed in 40 CFR 63.8693(i). Examples of such events are acts of nature, acts of war or terrorism, or equipment failure or safety hazards beyond the control of the facility.

The electronic submittal of the reports addressed in this proposed rulemaking will increase the usefulness of the data contained in those reports, is in keeping with current trends in data availability and transparency, will further assist in the protection of public health and the environment, will improve compliance by facilitating the ability of regulated facilities to demonstrate compliance with requirements, and by facilitating the ability of delegated state, local, tribal, and territorial air agencies and the EPA to assess and determine compliance, and will ultimately reduce burden on regulated facilities, delegated air agencies, and the EPA. Electronic reporting also eliminates paper-based, manual processes, thereby saving time and resources, simplifying data entry, eliminating redundancies, minimizing data reporting errors, and providing data quickly and accurately to the affected facilities, air agencies, the EPA, and the

public. Moreover, electronic reporting is consistent with the EPA's plan²⁴ to implement Executive Order 13563 and is in keeping with the EPA's Agency-wide policy²⁵ developed in response to the White House's Digital Government Strategy.²⁶ For more information on the benefits of electronic reporting, see the memorandum titled *Electronic Reporting Requirements for New Source Performance Standards (NSPS) and National Emission Standards for Hazardous Air Pollutants (NESHAP) Rules*, available in Docket ID No. EPA-HQ-OAR-2017-0662.

3. Operating Limits For Control Devices Used To Comply With The Particulate Standards

As part of the CAA section 114 request (see section II.C of this preamble), the EPA asked companies for suggestions to improve rule implementation or facilitate compliance activities. In lieu of the current requirement for facilities to set operating limits (*i.e.*, the maximum inlet gas temperature and maximum pressure drop across the device) based on levels measured during a performance test for control devices used to comply with the PM standards, several companies requested that the EPA allow facilities to use manufacturers' specifications to establish these site-specific operating limits. These companies pointed out that the EPA allows owners and operators to use manufacturers' specifications in the Asphalt Processing and Asphalt Roofing Manufacturing area source NESHAP at 40 CFR 63.11562(b)(3)(iii) for control devices other than thermal oxidizers. These companies also asserted that PM control devices achieve compliance with the PM standards of the Asphalt Processing and Asphalt Roofing

²⁴ The EPA's *Final Plan for Periodic Retrospective Reviews*, August 2011. Available at: <https://www.regulations.gov/document?D=EPA-HQ-OA-2011-0156-0154>.

²⁵ *E-Reporting Policy Statement for EPA Regulations*, September 2013. Available at: <https://www.epa.gov/sites/production/files/2016-03/documents/epa-ereporting-policy-statement-2013-09-30.pdf>.

²⁶ *Digital Government: Building a 21st Century Platform to Better Serve the American People*, May 2012. Available at: <https://obamawhitehouse.archives.gov/sites/default/files/omb/egov/digital-government/digital-government.html>.

Manufacturing NESHAP across a broad range of temperatures and pressure drops, but it is difficult to schedule testing dates that capture the maximum inlet gas temperature and maximum pressure drop across the device (*i.e.*, to demonstrate compliance across the entirety of the effective ranges) due to their dependence on ambient temperature and operating life of the filter media.

Based on this feedback, the EPA is proposing to add an option at 40 CFR 63.8689(d) and Table 2 to Subpart LLLLL of Part 63 to allow the use of manufacturers' specifications to establish the maximum pressure drop across the control device used to comply with the PM standards. However, although the manufacturers' specification for temperature would normally indicate proper operation of the control device, in this rule PM is acting as a surrogate for organic emissions. The particulate in question is condensed asphalt fumes, and formation of the PM and the emissions of organic compounds are temperature dependent. Therefore, instead of proposing the use of manufacturers' specifications for temperature limits, but to still provide facilities some flexibility with regard to an appropriate temperature range, the EPA is proposing to add a footnote to Table 2 to Subpart LLLLL of Part 63 of the Asphalt Processing and Asphalt Roofing Manufacturing NESHAP to allow owners and operators to use the performance test average inlet temperature and apply an operating margin of +20 percent to determine maximum inlet gas temperature of a control device used to comply with the PM standards. For example, during the three test runs conducted for an owner's or operator's performance test that demonstrated compliance with the emission limit, if the arithmetic average of the device inlet gas temperature recorded was 100 degrees Fahrenheit (°F), then under this proposed option, the owner's or operator's maximum operating limit for this control device would be 120°F, or +20 percent of 100°F. The +20 percent buffer addresses the high impact of ambient conditions on the

inlet temperature and removes some of the scheduling uncertainty while still accounting for the temperature dependence of emissions.

4. Ongoing Emissions Compliance Demonstrations Using Periodic Performance Testing

As part of an ongoing effort to improve compliance with various federal air emission regulations, the EPA reviewed the compliance demonstration requirements in the Asphalt Processing and Asphalt Roofing Manufacturing NESHAP. Currently, the results of an initial performance test are used to determine compliance with the standards; however, the current NESHAP does not require on-going periodic performance testing.

As mentioned by the Institute of Clean Air Companies (ICAC) in their comments on proposed revisions to the NESHAP General Provisions (72 FR 69, January 3, 2007), ongoing maintenance and checks of control devices are necessary in order to ensure emissions control technology remains effective.²⁷ To ensure ongoing compliance with the standards, and given these comments from ICAC (suppliers of air pollution control and monitoring technology) on the need for vigilance in maintaining equipment to stem degradation, the EPA is proposing periodic performance testing requirements at 40 CFR 63.8691(e) for each APCD used to comply with the PM, THC, opacity, or visible emission standards, in addition to the current one-time initial performance testing and ongoing operating limit monitoring. We are proposing that the performance tests must be conducted at least once every 5 years.

For PM and THC standards, we are proposing that owners and operators of asphalt processing and asphalt roofing manufacturing facilities would conduct three 1-hour (or longer) test runs to measure emissions according to 40 CFR 63.8687(d), and compliance would be

²⁷ See Docket Item No. EPA-HQ-OAR-2004-0094-0173, available at <https://www.regulations.gov>. A copy of the ICAC's comments on the proposed revisions to the General Provisions is also included in the docket for this action.

determined based on the average of the three test runs according to 40 CFR 63.7(e)(3). To measure PM, we are proposing at Table 3 to Subpart LLLLL of Part 63 that owners and operators would use EPA Method 5A of appendix A to 40 CFR part 60; and for THC emissions, we are proposing at Table 3 to Subpart LLLLL of Part 63 that owners and operators would use EPA Method 25A of appendix A to 40 CFR part 60 (with EPA Methods 3A and 10 if owners and operators are complying with the combustion efficiency standards or with EPA Methods 1-4 if meeting the THC destruction efficiency standards), which are the methods currently required for the initial compliance demonstration. To measure opacity, we are proposing at Table 3 to Subpart LLLLL of Part 63 that owners and operators would use EPA Method 9 of appendix A to 40 CFR part 60; and for visible emissions, we are proposing at Table 3 to Subpart LLLLL of Part 63 that owners and operators would use EPA Method 22 of appendix A to 40 CFR part 60, which are also the methods currently required for the initial compliance demonstration.

Finally, we recognize some affected sources are used infrequently. Therefore, we are proposing that owners and operators would not be required to restart an affected source for the sole purpose of complying with the periodic performance testing. Instead, upon restart of the affected source, we are proposing owners and operators conduct the first periodic performance test within 60 days of achieving normal operating conditions, but no later than 181 days from startup.

See section IV.F of this preamble for a discussion of when we are proposing that the first and subsequent periodic performance tests must be performed.

We estimated a cost for PM performance testing using EPA Test Method 5A to be \$16,500 for the first emission point, with an additional cost of \$11,100 for each additional emission point at a facility. We estimated a cost for THC performance testing using EPA Test

Method 25A to range from \$16,200 (if complying with the concentration standard) to \$20,750 (if complying with an efficiency standard). We estimated a cost for opacity testing using EPA Test Method 9 to be \$1,500. Details of these cost estimates are included in the memorandum titled *Cost Impacts of Asphalt Processing and Asphalt Roofing Manufacturing Risk and Technology Review Proposal* in Docket ID No. EPA-HQ-OAR-2017-0662. We solicit comment on our cost estimates for conducting these tests.

5. Other Corrections

There are several additional revisions that we are proposing to 40 CFR part 63, subpart LLLLL to clarify text or correct typographical errors, grammatical errors, and cross-reference errors. These proposed editorial corrections and clarifications are summarized in Table 4 of this preamble.

Table 4. Summary of Proposed Editorial and Minor Corrections to 40 CFR Part 63, Subpart LLLLL

| Provision | Proposed Revision |
|---|---|
| 40 CFR 63.8681(a) and (f), and 63.8683(c) | Remove duplicative cross-reference to definition of major source and point directly to 40 CFR 63.2. |
| 40 CFR 63.8683(d) | Clarify which paragraphs of 40 CFR 63.9 are applicable to be consistent with the General Provisions table to subpart LLLLL (Table 7). |
| 40 CFR 63.8684 | Revise heading to include “and operating limits” to clarify content of 40 CFR 63.8684. |
| 40 CFR 63.8686 | Revise heading to include “initial” to clarify content of 40 CFR 63.8686. |
| 40 CFR 63.8686(a) | Clarify paragraph is applicable to initial performance tests. |
| 40 CFR 63.8688(f) and 63.8688(h)(1) | Clarify which paragraphs of 40 CFR 63.8 are applicable to be consistent with the General Provisions table to subpart LLLLL (Table 7). |
| 40 CFR 63.8688(h)(3) | Clarify which paragraphs of 40 CFR 63.10 are applicable to be consistent with the General Provisions table to subpart LLLLL (Table 7). Also, for consistency, add references to reporting and recordkeeping sections of rule. |
| 40 CFR 63.8691 | Revise heading to “How do I conduct periodic performance tests and demonstrate continuous |

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| | compliance with the emission limits and operating limits?” to clarify content of 40 CFR 63.8691. |
| 40 CFR 63.8691(a) | Replace the words “test methods” with “the procedures” because Table 5 contains procedures not test methods. |
| 40 CFR 63.8692(a) | Delete the word “of.” |
| 40 CFR 63.8692(e) | Clarify this paragraph is applicable to all compliance demonstrations (not just initial compliance demonstrations). |
| 40 CFR 63.8693(d) | Clarify paragraph applies to compliance reports. |
| 40 CFR 63.8697(b)(1) | Clarify approval of alternatives to the requirements in 40 CFR 63.8684 and 40 CFR 63.8685 are retained by the Administrator of U.S. EPA. |
| 40 CFR 63.8698 | Clarify definitions of “adhesive applicator” and “sealant applicator” that open pan-type applicators were part of the asphalt roofing manufacturing lines that were considered in the original MACT analysis, and, thus, subject to the emission limitations. See Docket Item No. EPA-HQ-OAR-2002-0035-0009 titled <i>Documentation of Existing and New Source Maximum Achievable Control Technology (MACT) Floors for the National Emission Standards for Hazardous Air Pollutants (NESHAP) for Asphalt Processing and Roofing Manufacturing</i> for descriptions of adhesive and sealant applicators. |
| Paragraph 1 of Table 1 to Subpart LLLLL of Part 63 | Remove the duplicative reference to Group 1 asphalt storage tanks at new and reconstructed asphalt roofing manufacturing lines and add the word “asphalt” to the phrasing “roofing manufacturing lines.” |
| Footnote b of Table 1 to Subpart LLLLL of Part 63 | Correct reference to paragraph 3.a of Table 1 to Subpart LLLLL of Part 63. |
| Paragraph 4 of Table 2 to Subpart LLLLL of Part 63 | Clarify if owners and operators use other control devices that are neither a combustion device or a control device used to comply with the PM emission standards, then row 4 of Table 2 to Subpart LLLLL of Part 63 applies. |
| Footnote a of Table 2 to Subpart LLLLL of Part 63 | Correct reference to Table 2 to Subpart LLLLL of Part 63. |
| Footnote c of Table 2 to Subpart LLLLL of Part 63 | Replace the word “of” with “to.” |
| Paragraphs 11, 12, and 13 of Table 3 to Subpart LLLLL of Part 63 | Clarify these paragraphs are applicable to all performance testing (not just initial performance testing). |
| Paragraph 13 of Table 3 to Subpart LLLLL of Part 63 | Clarify if owners and operators use other control devices that are neither a combustion device or a control device used to comply with the PM emission standards, then row 13 of Table 3 to |

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| | Subpart LLLLL of Part 63 applies. |
| Footnote a of Table 3 to Subpart LLLLL of Part 63 | Correct reference to alternative option that allows results of a previously-conducted emission test to document conformance with the emission standards and operating limits of this subpart, and clarify this option is only applicable to initial performance testing. |
| Footnote c of Table 3 to Subpart LLLLL of Part 63 | Replace the word “of” with “to.” |
| Table 4 to Subpart LLLLL of Part 63 | Clarify table is applicable for both initial and continuous compliance. Also, remove the word “initial” in last column heading to clarify the requirements in the column are applicable to all performance testing (not just initial performance testing). |
| Paragraphs 4 and 5 of Table 4 to Subpart LLLLL of Part 63 | Correct reference to 40 CFR 63.8686. |
| Paragraph 4 of Table 5 to Subpart LLLLL of Part 63 | Clarify if owners and operators use other control devices that are neither a combustion device or a control device used to comply with the PM emission standards, then row 4 of Table 5 to Subpart LLLLL of Part 63 applies. |
| Footnote a of Table 5 to Subpart LLLLL of Part 63 | Correct references to Tables 2 and 5, and references to 40 CFR 63.8690 and 63.8(g)(1) through (4). |
| Footnote d of Table 5 to Subpart LLLLL of Part 63 | Replace the word “of” with “to.” |
| Table 7 to Subpart LLLLL of Part 63 | Correct typographical error to show that 40 CFR 63.8(d) does apply. Note, the typographical error is inconsistent with 40 CFR 63.8688(h)(2) which says 40 CFR 63.8(d) applies. |

F. What compliance dates are we proposing?

For three of the proposed rule revisions—changes related to removal of the exemption from the requirements to meet the standard during SSM periods, changes related to removal of the requirement to develop and implement an SSM plan, and addition of electronic reporting requirements—we anticipate that facilities would need 180 days to comply. This period of time will allow facilities 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 convert reporting mechanisms to install necessary hardware and software. The EPA considers a period of 180 days to be the most

expeditious compliance period practicable for these source categories and, thus, we are proposing that all affected sources must comply with the revisions to the SSM provisions and electronic reporting requirements no later than 181 days after the effective date of the final rule, or upon startup, whichever is later. We specifically seek comment on whether 180 days is enough time for owners and operators to comply with these proposed amendments, and if the proposed time window is not adequate, we request the commenter provide an explanation.

Also, we are proposing new requirements to conduct on-going periodic performance testing every 5 years (see section IV.E.4 of this preamble). Establishing a compliance date earlier than 3 years for the first periodic performance test can cause scheduling issues as affected sources compete for a limited number of testing contractors. Considering these scheduling issues, we are proposing that each existing affected source, and each new and reconstructed affected source that commences construction or reconstruction after November 21, 2001, and on or before [date of publication of final rule in the **Federal Register**] that uses an APCD to comply with the standards, must conduct the first periodic performance test on or before [date 3 years after date of publication of final rule in the **Federal Register**] and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test. For each new and reconstructed affected source that commences construction or reconstruction after [date of publication of final rule in the **Federal Register**] that uses an APCD to comply with the standards, we are proposing that owners and operators must conduct the first periodic performance no later than 60 months following the initial performance test required by 40 CFR 63.8689 and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test. If owners and operators used the alternative compliance option specified in 40 CFR 63.8686(b) to comply with the initial performance test, then we are proposing that they

must conduct the first periodic performance no later than 60 months following the date they demonstrated to the Administrator that the requirements of 40 CFR 63.8686(b) had been met.

V. Summary of Cost, Environmental, and Economic Impacts

A. What are the affected sources?

There are four asphalt processing facilities, plus another four asphalt processing facilities collocated with asphalt roofing manufacturing facilities, currently operating as major sources of HAP. As such, eight facilities will be subject to the proposed amendments. A complete list of facilities that are currently subject to the MACT standards is available in Appendix A of the memorandum titled *Clean Air Act Section 112(d)(6) Review for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories*, in Docket ID No. EPA-HQ-OAR-2017-0662.

B. What are the air quality impacts?

The EPA estimates that annual HAP emissions from the eight asphalt processing and asphalt roofing manufacturing facilities that are subject to the NESHAP are approximately 255 tpy. Because we are not proposing revisions to the emission limits, we do not anticipate any air quality impacts as a result of the proposed amendments.

C. What are the cost impacts?

We estimate that the proposed amendments will result in a nationwide net cost savings of \$221,100 over the 5-year period following promulgation of amendments. Because periodic performance testing would be required every 5 years, we estimated and summarized the cost savings over a 5-year period. The EPA believes that the eight asphalt processing and asphalt roofing manufacturing facilities that are known to be subject to the NESHAP can meet the proposed requirements without incurring additional capital costs. Therefore, the costs associated

with the proposed amendments are related to recordkeeping and reporting labor costs and periodic performance testing. The proposed requirement for periodic testing of once every 5 years results in an estimated increase in costs of about \$92,500 over the 5-year period in addition to an estimated cost of about \$3,300 for reviewing the proposed amendments. However, the proposed changes to the monitoring requirements for PM control devices result in an estimated cost savings of about \$316,900 over the 5-year period. Therefore, overall, we estimate a net cost savings of about \$221,100 for the 5-year period. The proposed amendments to the monitoring requirements are projected to alleviate some need for asphalt roofing manufacturing facilities to have to retest the PM control device for the sole purpose of reestablishing new temperature and pressure drop operating limits, and to allow facilities to extend filter replacement by 3 months. For further information on the amendments being proposed, see section IV.E of this preamble. For further information on the costs and cost savings associated with the proposed amendments, see the memoranda, *Cost Impacts of Asphalt Processing and Asphalt Roofing Manufacturing Risk and Technology Review Proposal*, and *Economic Impact Analysis for Asphalt Processing and Asphalt Roofing Manufacturing NESHA RTR Proposal*, which are available in the docket for this action. We solicit comment on these estimated cost impacts.

D. What are the economic impacts?

As noted earlier, we estimated a nationwide cost savings associated with the proposed requirements over the 5-year period following promulgation of these amendments. Therefore, we do not expect the actions in this proposed rulemaking to result in business closures, significant price increases, or substantial profit loss. For further information on the economic impacts associated with the requirements being proposed, see the memorandum, *Economic Impact*

Analysis for Asphalt Processing and Asphalt Roofing Manufacturing NESHAP RTR Proposal, which is available in the docket for this action.

E. What are the benefits?

The EPA is not proposing changes to emissions limits, and we estimate the proposed changes (*i.e.*, changes to SSM, recordkeeping, reporting, and monitoring) are not economically significant. Because these proposed amendments are not considered economically significant, as defined by Executive Order 12866, and because no emissions reductions were estimated, we did not estimate any benefits from reducing emissions.

VI. Request for Comments

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

VII. Submitting Data Corrections

The site-specific emissions profiles used in the source categories risk and demographic analyses and instructions are available for download on the RTR website at <https://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 categories.

If you believe that the data are not representative or are inaccurate, please identify the data in question, provide your reason for concern, and provide any “improved” data that you

have, if available. When you submit data, we request that you provide documentation of the basis for the revised values to support your suggested changes. To submit comments on the data downloaded from the RTR website, complete the following steps:

1. Within the 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-2017-0662 (through the method described in the **ADDRESSES** section of this preamble).

5. If you are providing comments on a single facility or multiple facilities, you need only submit one file for all facilities. The file should contain all suggested changes for all sources at that facility (or facilities). We request that all data revision comments be submitted in the form of updated Microsoft® Excel files that are generated by the Microsoft® Access file. These files are provided on the RTR website at <https://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 <https://www.epa.gov/laws-regulations/laws-and-executive-orders>.

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

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

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

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

C. Paperwork Reduction Act (PRA)

The information collection activities in this proposed rule have been submitted for approval to OMB under the PRA. The information collection request (ICR) document that the EPA prepared has been assigned EPA ICR number 2029.07. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

We are proposing amendments that require periodic performance testing, require electronic reporting, remove the malfunction exemption, and impose other revisions that affect reporting and recordkeeping for asphalt processing facilities and asphalt roofing manufacturing facilities. This information would be collected to assure compliance with 40 CFR part 63, subpart LLLLL.

Respondents/affected entities: Owners or operators of asphalt processing facilities and asphalt roofing manufacturing facilities.

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

Estimated number of respondents: Eight (total).

Frequency of response: Initial, semiannual, and annual.

Total estimated burden: 69 hours (per year). Burden is defined at 5 CFR 1320.3(b).

Total estimated cost: \$53,800 (per year), which includes \$46,300 annualized capital and operation and maintenance costs.

The estimated costs described in this section of the preamble are entirely offset by cost savings that are projected to alleviate some need for asphalt roofing manufacturing facilities to have to retest a PM control device for the sole purpose of reestablishing new temperature and pressure drop operating limits; and allow facilities to extend filter replacement by 3 months (see section V.C of this preamble for details). 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 **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. 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 affected in this regulated industry. See the document, *Economic Impact Analysis for Asphalt Processing and Asphalt Roofing Manufacturing NESHAP RTR Proposal*, available in the docket for this action.

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. None of the eight asphalt processing and asphalt roofing manufacturing facilities that have been identified as being affected by this proposed action are owned or operated by tribal governments or located within tribal lands. 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 C and sections IV.A and B of this preamble, and are further documented in the risk report, *Residual Risk Assessment for the Asphalt Processing and Asphalt Roofing Manufacturing Source Categories in Support of the 2018 Risk and Technology Review Proposed Rule*, available in the docket for this action.

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) and 1 CFR Part 51

This rulemaking involves technical standards. Therefore, the EPA conducted searches for the Asphalt Processing and Asphalt Roofing Manufacturing NESHAP through the Enhanced National Standards Systems Network Database managed by the American National Standards Institute (ANSI). We also contacted voluntary consensus standards (VCS) organizations and accessed and searched their databases. We conducted searches for EPA Methods 3A, 5A, 9, 10, 22, and 25A of 40 CFR part 60, appendix A. During the EPA's VCS search, if the title or abstract (if provided) of the VCS described technical sampling and analytical procedures that are similar to the EPA's reference method, the EPA reviewed it as a potential equivalent method. We reviewed all potential standards to determine the practicality of the VCS for this rule. This review requires significant method validation data that meet the requirements of EPA Method 301 for accepting alternative methods or scientific, engineering and policy equivalence to procedures in the EPA reference methods. The EPA may reconsider determinations of impracticality when additional information is available for particular VCS.

No applicable VCS were identified for EPA Methods 5A and 22. The following VCS were identified as acceptable alternatives to the EPA test methods for the purpose of this rule.

The EPA proposes to incorporate by reference the VCS ASTM D7520-2013 "Standard Test Method for Determining the Opacity of a Plume in the Outdoor Ambient Atmosphere" as an acceptable alternative to EPA Method 9 with conditions. During the digital camera opacity

technique (DCOT) certification procedure outlined in Section 9.2 of ASTM D7520-2013, you or the DCOT vendor must present the plumes in front of various backgrounds of color and contrast representing conditions anticipated during field use such as blue sky, trees, and mixed backgrounds (clouds and/or a sparse tree stand). You must also have standard operating procedures in place, including daily or other frequency quality checks, to ensure the equipment is within manufacturing specifications as outlined in Section 8.1 of ASTM D7520-2013. You must follow the recordkeeping procedures outlined in 40 CFR 63.10(b)(1) for the DCOT certification, compliance report, data sheets, and all raw unaltered JPEG formatted images used for opacity and certification determination. You or the DCOT vendor must have a minimum of four (4) independent technology users apply the software to determine the visible opacity of the 300 certification plumes. For each set of 25 plumes, the user may not exceed 15-percent opacity of any one reading, and the average error must not exceed 7.5-percent opacity. This approval does not provide or imply a certification or validation of any vendor's hardware or software. The onus to maintain and verify the certification and/or training of the DCOT camera, software, and operator in accordance with ASTM D7520-2013 and this letter is on the facility, DCOT operator, and DCOT vendor. This method is available at ASTM International, 1850 M Street NW, Suite 1030, Washington, DC 20036. See <https://www.astm.org/>.

Finally, the search identified 11 other VCS that were potentially applicable for this rule in lieu of the EPA reference methods. After reviewing the available standards, the EPA determined that 11 candidate VCS identified for measuring emissions of pollutants or their surrogates subject to emission standards in the rule would not be practical due to lack of equivalency, documentation, validation data, and other important technical and policy considerations. Additional information for the VCS search and determinations can be found in the memorandum,

Voluntary Consensus Standard Results for National Emission Standards for Hazardous Air Pollutants for Asphalt Processing and Asphalt Roofing Manufacturing, which is available in the docket for this action.

The EPA welcomes comments on this aspect of the proposed rulemaking, and, specifically, invites the public to identify potentially applicable VCS, and to explain why the EPA should use such standards in this regulation.

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 in the technical report, *Risk and Technology Review - Analysis of Demographic Factors for Populations Living Near Asphalt Processing and Asphalt Roofing Manufacturing Source Categories Operations*, available in the docket for this action.

List of Subjects in 40 CFR Part 63

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

Dated: April 16, 2019.

Andrew R. Wheeler,
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 A—[Amended]

2. Section 63.14 is amended by revising paragraph (h)(95) to read as follows:

§ 63.14 Incorporations by reference.

* * * * *

(h) * * *

(95) ASTM D7520-13, Standard Test Method for Determining the Opacity of a Plume in an Outdoor Ambient Atmosphere, approved December 1, 2013. IBR approved for §§63.1510(f), 63.1511(d), 63.1512(a), 63.1517(b) and 63.1625(b), and table 3 to subpart LLLLL.

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Subpart LLLLL—[Amended]

3. Section 63.8681 is amended by revising paragraph (a) and removing and reserving paragraph (f) to read as follows:

§ 63.8681 Am I subject to this subpart?

(a) You are subject to this subpart if you own or operate an asphalt processing facility or an asphalt roofing manufacturing facility, as defined in § 63.8698, that is a major source as defined in § 63.2, or is located at, or is part of a major source as defined in § 63.2.

* * * * *

4. Section 63.8683 is amended by revising paragraphs (c) and (d) to read as follows:

§ 63.8683 When must I comply with this subpart?

* * * * *

(c) If you have an area source that increases its emissions or its potential to emit such that it becomes a (or part of a) major source as defined in § 63.2, then the following requirements apply.

(d) You must meet the notification requirements in § 63.8692 according to the schedules in §§ 63.8692 and 63.9(a) through (f) and (h). Some of the notifications must be submitted before you are required to comply with the emission limitations in this subpart.

5. Section 63.8684 is amended by revising the section heading to read as follows:

§ 63.8684 What emission limitations and operating limits must I meet?

6. Section 63.8685 is amended by revising paragraphs (a) through (c) to read as follows:

§ 63.8685 What are my general requirements for complying with this subpart?

(a) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of startup, shutdown, and malfunction. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must be in compliance with the emission limitations (including operating limits) in this subpart at all times, except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

(b) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], 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). On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], 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 that 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 affected source.

(c) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must develop a written startup, shutdown, and malfunction plan (SSMP) according to the provisions in § 63.6(e)(3). On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], a startup, shutdown, and malfunction plan is not required.

* * * * *

7. Section 63.8686 is amended by:

- a. Revising the section heading;
- b. Revising paragraphs (a) and (b)(3); and
- c. Adding paragraph (b)(4).

The revisions and addition read as follows:

§ 63.8686 By what date must I conduct initial performance tests or other initial compliance

demonstrations?

(a) For existing affected sources, you must conduct initial performance tests no later than 180 days after the compliance date that is specified for your source in § 63.8683 and according to the provisions in § 63.7(a)(2).

(b) As an alternative to the requirement specified in paragraph (a) of this section, you may use the results of a previously-conducted emission test to demonstrate compliance with the emission limitations in this subpart if you demonstrate to the Administrator's satisfaction that:

(1) * * *

(2) * * *

(3) The control device and process parameter values established during the previously-conducted emission test are used to demonstrate continuous compliance with this subpart; and

(4) The previously-conducted emission test was completed within the last 5 years.

* * * * *

8. Section 63.8687 is amended by revising paragraph (b) and removing and reserving paragraph (c) to read as follows:

§ 63.8687 What performance tests, design evaluations, and other procedures must I use?

* * * * *

(b) Each performance test must be conducted under normal operating conditions and under the conditions specified in Table 3 to this subpart. Operations during periods of startup, shutdown, or nonoperation do not constitute representative conditions for purposes of conducting a performance test. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and explain why the conditions represent normal operation. Upon request, you must

make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

* * * * *

9. Section 63.8688 is amended by revising paragraphs (f) and (h) to read as follows:

§ 63.8688 What are my monitoring installation, operation, and maintenance requirements?

* * * * *

(f) As an option to installing the CPMS specified in paragraph (a) of this section, you may install a continuous emissions monitoring system (CEMS) or a continuous opacity monitoring system (COMS) that meets the applicable requirements in § 63.8 according to Table 7 to this subpart and the applicable performance specifications of 40 CFR part 60, appendix B.

* * * * *

(h) In your site-specific monitoring plan, you must also address the following:

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

(2) Ongoing data quality assurance procedures in accordance with the general requirements of § 63.8(d); and

(3) Ongoing recordkeeping and reporting procedures in accordance with §§ 63.8693, 63.8694, and the general requirements of § 63.10(e)(1) and (e)(2)(i).

* * * * *

10. Section 63.8689 is amended by revising paragraph (b) and adding paragraph (d) to read as follows:

§ 63.8689 How do I demonstrate initial compliance with the emission limitations?

* * * * *

(b) Except as specified in paragraph (d) of this section, you must establish each site-specific operating limit in Table 2 to this subpart that applies to you according to the requirements in § 63.8687 and Table 3 to this subpart.

* * * * *

(d) For control devices used to comply with the particulate matter standards, you may establish the pressure drop across the control device operating limit using manufacturers' specifications in lieu of complying with paragraph (b) of this section.

11. Section 63.8690 is amended by revising paragraph (b) to read as follows:

§ 63.8690 How do I monitor and collect data to demonstrate continuous compliance?

* * * * *

(b) Before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], except for monitor malfunctions, associated repairs, and required quality assurance or control activities (including, as applicable, calibration checks and required zero and span adjustments), you must monitor continuously (or collect data at all required intervals) at all times that the affected source is operating including periods of startup, shutdown, and malfunction when the affected source is operating. On and after [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must monitor and collect data at all times in accordance with § 63.8685(b), except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

* * * * *

12. Section 63.8691 is amended by:

a. Revising the section heading;

- b. Revising paragraphs (a), (b), and (d); and
- c. Adding paragraph (e).

The revisions and addition read as follows:

§ 63.8691 How do I conduct periodic performance tests and demonstrate continuous compliance with the emission limitations and operating limits?

(a) You must demonstrate continuous compliance with each operating limit in Table 2 to this subpart that applies to you according to the procedures specified in Table 5 to this subpart, and you must conduct performance tests as specified in paragraph (e) of this section.

(b) Before [DATE 181 DAYS AFTER PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must report each instance in which you did not meet each operating limit in Table 5 to this subpart that applies to you. This includes periods of startup, shutdown, and malfunction. These instances are deviations from the emission limitations in this subpart. These deviations must be reported according to the requirements in § 63.8693. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must report each instance in which you did not meet each operating limit in Table 5 to this subpart that applies to you, except during periods of nonoperation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

* * * * *

(d) Before [DATE 181 DAYS AFTER DATE OF 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). On and after [date 181 days after date of publication of final rule in the **Federal Register**], this paragraph no longer applies.

(e) For each control device used to comply with the PM, THC, opacity, or visible emission standards of this subpart, you must conduct periodic performance tests using the applicable procedures specified in § 63.8687 and Table 4 to this subpart to demonstrate compliance with § 63.8684(a), and to confirm or reestablish the operating limits required by § 63.8684(b). You must conduct periodic performance tests according to the schedule specified in paragraphs (e)(1) through (3) of this section.

(1) Except as specified in paragraph (e)(3) of this section, for each existing affected source, and for each new and reconstructed affected source that commences construction or reconstruction after November 21, 2001 and on or before [DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must conduct the first periodic performance test on or before [DATE 3 YEARS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**] and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test.

(2) Except as specified in paragraph (e)(3) of this section, for each new and reconstructed affected source that commences construction or reconstruction after [DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must conduct the first periodic performance no later than 60 months following the initial performance test required by § 63.8689 and conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test. If you used the alternative compliance option specified in §

63.8686(b) to comply with the initial performance test, then you must conduct the first periodic performance no later than 60 months following the date you demonstrated to the Administrator that the requirements of § 63.8686(b) had been met.

(3) If an affected source is not operating on the dates the periodic performance test is required to be conducted as specified in paragraph (e)(1) or (2) of this section, then you are not required to restart the affected source for the sole purpose of complying with paragraph (e)(1) or (2) of this section. Instead, upon restart of the affected source, you must conduct the first periodic performance test within 60 days of achieving normal operating conditions but no later than 180 days from startup. You must conduct subsequent periodic performance tests no later than 60 months thereafter following the previous performance test.

13. Section 63.8692 is amended by revising paragraphs (a), (e), and (f) to read as follows:

§ 63.8692 What notifications must I submit and when?

(a) You must submit all the notifications in §§ 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(f), and 63.9(b) through (f) and (h) that apply to you by the dates specified.

* * * * *

(e) If you are required to conduct a performance test, design evaluation, opacity observation, visible emission observation, or other compliance demonstration as specified in Table 3 or 4 to this subpart, you must submit a Notification of Compliance Status according to § 63.9(h)(2)(ii). You must submit the Notification of Compliance Status, including the performance test results, before the close of business on the 60th calendar day following the completion of the performance test according to § 63.10(d)(2). On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must submit all subsequent Notification of Compliance Status reports to EPA via the

Compliance and Emissions Data Reporting Interface (CEDRI), which can be accessed through EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). If you claim some of the information required to be submitted via CEDRI is confidential business information (CBI), then submit a complete report, including information claimed to be CBI, to EPA. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described earlier in this paragraph. You may assert a claim of EPA system outage or force majeure for failure to timely comply with this reporting requirement provided you meet the requirements outlined in §§ 63.8693(h) or (i), as applicable.

(f) If you are using data from a previously-conducted emission test to serve as documentation of conformance with the emission standards and operating limits of this subpart as specified in § 63.8686(b), you must submit the test data in lieu of the initial performance test results with the Notification of Compliance Status required under paragraph (e) of this section.

14. Section 63.8693 is amended by:

- a. Adding paragraph (b)(6);
- b. Revising paragraphs (c)(4) and (c)(5), (d)(1) through (d)(4), and (d)(6);
- c. Adding paragraph (d)(13);
- d. Revising paragraph (f); and
- e. Adding paragraphs (g) through (i).

The revisions and additions read as follows:

§ 63.8693 What reports must I submit and when?

* * * * *

(b) * * *

(6) On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], you must submit all compliance reports to EPA via the CEDRI, which can be accessed through EPA's CDX (<https://cdx.epa.gov/>). You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. The report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. If you claim some of the information required to be submitted via CEDRI is CBI, submit a complete report, including information claimed to be CBI, to EPA. The report must be generated using the appropriate form on the CEDRI website or an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described earlier in this paragraph. You may assert a claim of EPA system outage or force majeure for failure to timely comply with this reporting requirement provided you meet the requirements outlined in §§ 63.8693(h) or (i), as applicable.

(c) * * *

(4) Before [DATE 181 DAYS AFTER DATE OF 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 SSMP, the compliance report must include the information in § 63.10(d)(5)(i). On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], this paragraph no longer applies.

(5) For each reporting period, you must include in the compliance report the total number of deviations that occurred during the reporting period. If there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and visible emission limit) that apply to you, then you must include a statement that there were no deviations from the emission limitations during the reporting period.

(d) * * *

(1) The start date, start time, and duration of each malfunction.

(2) For each instance that the CPMS, CEMS, or COMS was inoperative, except for zero (low-level) and high-level checks, the start date, start time, and duration that the CPMS, CEMS, or COMS was inoperative; the cause (including unknown cause) for the CPMS, CEMS, or COMS being inoperative; and descriptions of corrective actions taken.

(3) For each instance that the CPMS, CEMS, or COMS was out-of-control as specified in § 63.8(c)(7), the start date, start time, and duration that the CPMS, CEMS, or COMS was out-of-control, including the information in § 63.8(c)(8).

(4) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], the start date, start time, and duration of the deviation, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during

another period. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], the start date, start time, and duration of the deviation including a description of the deviation and the actions you took to minimize emissions in accordance with § 63.8685(b). You must also include:

- (i) A list of the affected sources or equipment for which the deviation occurred;
- (ii) The cause of the deviation (including unknown cause, if applicable); and
- (iii) Any corrective actions taken to return the affected unit to its normal or usual manner of operation.

* * * * *

(6) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], a breakdown of the total duration of the deviations during the reporting period into those that are due to control equipment problems, process problems, other known causes, and other unknown causes.

(13) On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], for each deviation from an emission limitation in § 63.8684, you must include an estimate of the quantity of each regulated pollutant emitted over any emission limitation in § 63.8684, and a description of the method used to estimate the emissions.

* * * * *

(f) On and after [DATE181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (f)(1) through (3) of this section.

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

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

(3) *CBI.* If you claim some of the information submitted under paragraph (a)(1) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention:

Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in paragraph (f)(1) of this section.

(g) On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], within 60 days after the date of completing each continuous monitoring system (CMS) performance evaluation (as defined in §63.2) as specified in your site-specific monitoring plan, you must submit the results of the performance evaluation following the procedures specified in paragraphs (g)(1) through (3) of this section.

(1) *Performance evaluations of CMS measuring relative accuracy test audit (RATA) pollutants that are supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.* Submit the results of the performance evaluation to EPA via CEDRI, which can be accessed through EPA's CDX. The data must be submitted in a file format generated through the use of EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on EPA's ERT website.

(2) *Performance evaluations of CMS measuring RATA pollutants that are not supported by EPA's ERT as listed on EPA's ERT website at the time of the evaluation.* The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the ERT generated package or alternative file to EPA via CEDRI.

(3) *CBI.* If you claim some of the information submitted under paragraph (g)(1) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to EPA. The file must be generated through the use of EPA's ERT or an alternate electronic file consistent with the XML schema listed on EPA's ERT website. Submit the file on a compact

disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to EPA via EPA's CDX as described in paragraph (g)(1) of this section.

(h) If you are required to electronically submit a report through CEDRI in EPA's CDX, you may assert a claim of EPA system outage for failure to timely comply with the reporting requirement. To assert a claim of EPA system outage, you must meet the requirements outlined in paragraphs (h)(1) through (7) of this section.

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

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

(3) The outage may be planned or unplanned.

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

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

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

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

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

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

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

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

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

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

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

(3) You must provide to the Administrator:

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

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

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

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

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

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

Section 63.8694 is amended by revising paragraph (a)(2) and adding paragraph (e) to read as follows:

§ 63.8694 What records must I keep?

(a)***

(2) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], the records in § 63.6(e)(3)(iii) through (v) related to startup, shutdown, and malfunction. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], this paragraph no longer applies.

* * * * *

(e) Any records required to be maintained by this part that are submitted electronically via EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic

copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or EPA as part of an on-site compliance evaluation.

15. Section 63.8697 is amended by revising paragraph (b)(1) to read as follows:

§ 63.8697 Who implements and enforces this subpart?

* * * * *

(b) * * *

(1) Approval of alternatives to the requirements in §§ 63.8681, 63.8682, 63.8683, 63.8684, 63.8685, 63.8686, 63.8687, 63.8688, 63.8689, 63.8690, and 63.8691.

* * * * *

16. Section 63.8698 is amended by revising the definitions of “Adhesive applicator,” “Deviation,” and “Sealant applicator” to read as follows:

§ 63.8698 What definitions apply to this subpart?

* * * * *

Adhesive applicator means the equipment that uses open pan-type application (e.g., a roller partially submerged in an open pan of adhesive) to apply adhesive to roofing shingles for producing laminated or dimensional roofing shingles.

* * * * *

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

(1) Fails to meet any requirement or obligation established by this subpart including, but not limited to, any emission limitation (including any operating limit), or work practice standard;

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

(3) Before [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], fails to meet any emission limitation (including any operating limit) or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. On and after [DATE 181 DAYS AFTER DATE OF PUBLICATION OF FINAL RULE IN THE **FEDERAL REGISTER**], this paragraph no longer applies.

* * * * *

Sealant applicator means the equipment that uses open pan-type application (e.g., a roller partially submerged in an open pan of sealant) to apply a sealant strip to a roofing product. The sealant strip is used to seal overlapping pieces of roofing product after they have been applied.

* * * * *

17. Table 1 to Subpart LLLLL of Part 63 is amended by revising row 1 and footnote b to read as follows:

Table 1 to Subpart LLLLL of Part 63—Emission Limitations

| For— | You must meet the following emission limitation— |
|--|--|
| 1. Each blowing still, Group 1 asphalt loading rack, and Group 1 asphalt storage tank at existing, new, and reconstructed asphalt processing facilities; and each Group 1 asphalt storage tank at existing, new, and reconstructed asphalt roofing manufacturing lines; and each coating mixer, saturator (including wet looper), coater, sealant applicator, and adhesive applicator at new and reconstructed asphalt roofing manufacturing lines | a. Reduce total hydrocarbon mass emissions by 95 percent, or to a concentration of 20 ppmv, on a dry basis corrected to 3 percent oxygen; b. Route the emissions to a combustion device achieving a combustion efficiency of 99.5 percent; c. Route the emissions to a combustion device that does not use auxiliary fuel achieving a total hydrocarbon (THC) destruction efficiency of 95.8 percent; d. Route the emissions to a boiler or process heater with a design heat input capacity of 44 megawatts (MW) or greater; |

| For— | You must meet the following emission limitation— |
|-----------|---|
| | e. Introduce the emissions into the flame zone of a boiler or process heater; or f. Route emissions to a flare meeting the requirements of § 63.11(b). |
| * * * * * | |

* * * * *

^b The opacity limit can be exceeded for one consecutive 15-minute period in any 24-hour period when the storage tank transfer lines are being cleared. During this 15-minute period, the control device must not be bypassed. If the emissions from the asphalt storage tank are ducted to the saturator control device, the combined emissions from the saturator and storage tank must meet the 20 percent opacity limit (specified in 3.a of Table 1 to this subpart) during this 15-minute period. At any other time, the opacity limit applies to Group 2 asphalt storage tanks.

18. Table 2 to Subpart LLLLL of Part 63 is amended by:

- a. Revising rows 3 and 4;
- b. Revising footnotes a and c; and
- c. Adding footnote d.

The revisions and addition read as follows:

Table 2 to Subpart LLLLL of Part 63—Operating Limits

| For— | You must ^a |
|---|---|
| * * * * * | |
| 3. Control devices used to comply with the particulate matter standards. | a. Maintain the 3-hour average ^b inlet gas temperature at or below the operating limit established during the performance test; ^d and b. Maintain the 3-hour average ^b pressure drop across the device ^c at or below either the operating limit established during the performance test, or as an alternative, according to manufacturer's specifications. |
| 4. Other control devices that are neither a combustion device or a control device used to comply with the particulate matter emission standards | Maintain the approved monitoring parameters within the operating limits established during the performance test. |

^aThe operating limits specified in Table 2 to this subpart are applicable if you are monitoring control device operating parameters to demonstrate continuous compliance. If you are using a CEMS or COMS, you must maintain emissions below the value established during the initial performance test.

* * * * *

^cAs an alternative to monitoring the pressure drop across the control device, owners or operators using an ESP to achieve compliance with the emission limits specified in Table 1 to this subpart can monitor the voltage to the ESP.

If this option is selected, the ESP voltage must be maintained at or above the operating limit established during the performance test.

^d The inlet gas temperature operating limit is set at +20 percent of the test run average inlet gas temperature measured during the performance test.

19. Table 3 to Subpart LLLLL of Part 63 is amended by:

a. Revising rows 1, 7, and 11 through 13;

b. Revising footnotes a and c; and

c. Adding footnote d.

The revisions and addition read as follows:

Table 3 to Subpart LLLLL of Part 63—Requirements for Performance Tests^{a b}

| For— | You must— | Using— | According to the following requirements— |
|--|--|--|---|
| 1. All particulate matter, total hydrocarbon, carbon monoxide, and carbon dioxide emission tests | a. Select sampling port's location and the number of traverse points | i. EPA test method 1 or 1A in appendix A to part 60 of this chapter | A. For demonstrating compliance with the total hydrocarbon percent reduction standard, the sampling sites must be located at the inlet and outlet of the control device prior to any releases to the atmosphere. B. For demonstrating compliance with the particulate matter mass emission rate, THC destruction efficiency, THC outlet concentration, or combustion efficiency standards, the sampling sites must be located at the outlet of the control device prior to any releases to the atmosphere. |
| * * * | * * * | * * * | |
| 7. All opacity tests | Conduct opacity observations | EPA test method 9 in appendix A to part 60 of this chapter, or ASTM D7520-2013 (incorporated by reference, see § 63.14) ^d | Conduct opacity observations for at least 3 hours and obtain 30, 6-minute averages. |
| * * * | * * * | * * * | |
| 11. Each combustion device | Establish a site-specific combustion zone | Data from the CPMS and the | You must collect combustion zone temperature data every 15 minutes |

| For— | You must— | Using— | According to the following requirements— |
|--|--|---|---|
| | temperature limit | applicable performance test method(s) | during the entire period of the 3-hour performance test, and determine the average combustion zone temperature over the 3-hour performance test by computing the average of all of the 15-minute readings. |
| 12. Each control device used to comply with the particulate matter emission standards | Establish a site-specific inlet gas temperature limit; and establish a site-specific limit for the pressure drop across the device | Data from the CPMS and the applicable performance test method(s) | You must collect the inlet gas temperature and pressure drop ^b data every 15 minutes during the entire period of the 3-hour performance test, and determine the average inlet gas temperature and pressure drop ^c over the 3-hour performance test by computing the average of all of the 15-minute readings. |
| 13. Each control device that is neither a combustion device nor a control device used to comply with the particulate matter emission standards | Establish site-specific monitoring parameters | Process data and data from the CPMS and the applicable performance test method(s) | You must collect monitoring parameter data every 15 minutes during the entire period of the 3-hour performance test, and determine the average monitoring parameter values over the 3-hour performance test by computing the average of all of the 15-minute readings. |
| * * * | * * * | * * * | |

^a For initial performance tests, as specified in § 63.8686(b), you may request that data from a previously-conducted emission test serve as documentation of conformance with the emission standards and operating limits of this subpart.

* * *

^cAs an alternative to monitoring the pressure drop across the control device, owners or operators using an ESP to achieve compliance with the emission limits specified in Table 1 to this subpart can monitor the voltage to the ESP.

^d If you use ASTM D7520-2013 in lieu of EPA test method 9, then you must comply with the conditions specified in this paragraph. During the digital camera opacity technique (DCOT) certification procedure outlined in Section 9.2 of ASTM D7520-2013, you or the DCOT vendor must present the plumes in front of various backgrounds of color and contrast representing conditions anticipated during field use such as blue sky, trees, and mixed backgrounds (clouds and/or a sparse tree stand). You must also have standard operating procedures in place including daily or other frequency quality checks to ensure the equipment is within manufacturing specifications as outlined in Section 8.1 of ASTM D7520-2013. You must follow the record keeping procedures outlined in §63.10(b)(1) for the DCOT certification, compliance report, data sheets, and all raw unaltered JPEGs used for opacity and certification determination. You or the DCOT vendor must have a minimum of four (4) independent technology users apply the software to determine the visible opacity of the 300 certification plumes. For each set of 25 plumes, the user may not exceed 15% opacity of any one reading and the average error must not exceed 7.5% opacity. This approval does not provide or imply a certification or validation of any vendor's hardware or software. The onus to maintain and verify the certification and/or training of the DCOT camera, software and operator in accordance with ASTM D7520-2013 and this letter is on the facility, DCOT operator, and DCOT vendor.

20. Table 4 to Subpart LLLLL of Part 63 is amended by:

- a. Revising the table title;
- b. Revising the fourth column heading; and
- c. Revising rows 4 and 5.

The revisions read as follows:

Table 4 to Subpart LLLLL of Part 63—Initial and Continuous Compliance With Emission Limitations

| For— | | For the following emission limitation— | You have demonstrated compliance if— |
|--|--|--|--|
| * * * * * | | | |
| 4. Each saturator (including wet looper) and coater at an existing, new, or reconstructed asphalt roofing manufacturing line | | a. Limit visible emissions from the emissions capture system to 20 percent of any period of consecutive valid observations totaling 60 minutes | The visible emissions, measured using EPA test method 22, for any period of consecutive valid observations totaling 60 minutes during the initial compliance period described in § 63.8686 do not exceed 20 percent. |
| | | b. Limit opacity emissions to 20 percent | The opacity, measured using EPA test method 9, for each of the first 30 6-minute averages during the initial compliance period described in § 63.8686 does not exceed 20 percent. |
| 5. Each Group 2 asphalt storage tank at existing, new, and reconstructed asphalt processing facilities and asphalt roofing manufacturing lines | | Limit exhaust gases to 0 percent opacity | The opacity, measured using EPA test method 9, for each of the first 30 6-minute averages during the initial compliance period described in § 63.8686 does not exceed 0 percent. |

* * * * *

21. Table 5 to Subpart LLLLL of Part 63 is amended by revising rows 3 and 4 and

revising footnotes a and d to read as follows:

Table 5 to Subpart LLLLL of Part 63—Continuous Compliance With Operating Limits^a

| For— | For the following operating limit— | You must demonstrate continuous compliance by— |
|--|---|--|
| * * * * | * * * | |
| 3. Control devices used to comply with the particulate matter emission standards | a. Maintain the 3-hour ^c average inlet gas temperature and pressure drop across device ^d at or below the operating limits established during the performance test | i. Passing the emissions through the control device; and ii. Collecting the inlet gas temperature and pressure drop ^d data according to § 63.8688(b) and (c); and iii. Reducing inlet gas temperature and pressure drop ^d data to 3-hour ^c averages according to calculations in Table 3 to this subpart; and iv. Maintaining the 3-hour ^c average inlet gas temperature and pressure drop ^d within the level established during the performance test. |
| 4. Other control devices that are neither a combustion device nor a control device used to comply with the particulate matter emission standards | a. Maintain the monitoring parameters within the operating limits established during the performance test | i. Passing the emissions through the devices; ii. Collecting the monitoring parameter data according to § 63.8688(d); and iii. Reducing the monitoring parameter data to 3-hour ^c averages according to calculations in Table 3 to this subpart; and iv. Maintaining the monitoring parameters within the level established during the performance test. |

^aThe operating limits specified in Table 2 to this subpart and the requirements specified in Table 5 to this subpart are applicable if you are monitoring control device operating parameters to demonstrate continuous compliance. If you use a CEMS or COMS to demonstrate compliance with the emission limits, you are not required to record control device operating parameters. However, you must maintain emissions below the value established during the initial performance test. Data from the CEMS and COMS must be reduced as specified in §§ 63.8690 and 63.8(g)(1) through (4).

* * * *

^dAs an alternative to monitoring the pressure drop across the control device, owners or operators using an ESP to achieve compliance with the emission limits specified in Table 1 to this subpart can monitor the voltage to the ESP. If this option is selected, the ESP voltage must be maintained at or above the operating limit established during the performance test.

22. Table 6 to Subpart LLLLL of Part 63 is amended by revising rows 4, 5, and 6 and adding row 7 to read as follows:

Table 6 to Subpart LLLLL of Part 63—Requirements for Reports

| You must submit— | The report must contain— | You must submit the report— |
|---|---|--|
| * * * * | * * * | |
| 4. Notification of compliance status | The information in § 63.9(h)(2) through (5), as applicable | According to the requirements in §§ 63.8692(e) and 63.9(h)(2) through (5), as applicable. |
| 5. A compliance report | a. A statement that there were no deviations from the emission limitations during the reporting period, if there are no deviations from any emission limitations (emission limit, operating limit, opacity limit, and visible emission limit) that apply to you | Semiannually according to the requirements in § 63.8693(b). |
| | b. If there were no periods during which the CPMS, CEMS, or COMS was out-of-control as specified in § 63.8(c)(7), a statement that there were no periods during which the CPMS, CEMS, or COMS was out-of-control during the reporting period | Semiannually according to the requirements in § 63.8693(b). |
| | c. If you have a deviation from any emission limitation (emission limit, operating limit, opacity limit, and visible emission limit), the report must contain the information in § 63.8693(c) and (d). | Semiannually according to the requirements in § 63.8693(b). |
| | d. Before [date 181 days after date of 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). On and after [date 181 days after date of publication of final rule in the Federal Register], this paragraph no longer applies. | Semiannually according to the requirements in § 63.8693(b). |
| 6. An immediate startup, shutdown, and malfunction report if you have a startup, shutdown, or malfunction during the reporting period before [date 181 days after | The information in § 63.10(d)(5)(ii) | By fax or telephone within 2 working days after starting actions inconsistent with the plan followed by a letter within 7 working days after the end of the event unless you |

| You must submit— | The report must contain— | You must submit the report— |
|--|---------------------------|--|
| date of publication of final rule in the Federal Register], and actions taken were not consistent with your startup, shutdown, and malfunction plan. On and after [date 181 days after date of publication of final rule in the Federal Register], this paragraph no longer applies. | | have made alternative arrangements with the permitting authority. |
| 7. Performance test report | The information in § 63.7 | Within 60 days after completion of the performance test according to the requirements in § 63.8693(f). |

23. Table 7 to Subpart LLLLL of Part 63 is amended by:

a. Revising the rows for §§ 63.6(e)(1)(i), 63.6(e)(3), 63.6(f)(1), 63.6(h)(1), 63.7(e)(1), 63.8(c)(1)(i), 63.8(c)(1)(ii), 63.8(c)(1)(iii), 63.8(d), 63.10(b)(2)(i), and 63.10(d)(5);

b. Adding rows for §§ 63.6(e)(1)(ii) and (iii), 63.7(e)(4), 63.10(b)(2)(ii), 63.10(b)(2)(iii), 63.10(b)(2)(iv), and 63.10(b)(2)(v); and

c. Removing the row for § 63.8(c)(1).

The revisions and additions read as follows:

Table 7 to Subpart LLLLL of Part 63—Applicability of General Provisions to Subpart LLLLL

| Citation | Subject | Brief description | Applies to subpart LLLLL |
|-----------------|-------------------------|--|---|
| * * * * * | * * * * * | * * * * * | * * * * * |
| § 63.6(e)(1)(i) | Operation & Maintenance | Operate to minimize emissions at all times | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. See § 63.8685(b) for general duty requirement. |

| | | | |
|-------------------|--|--|--|
| § 63.6(e)(1)(ii) | Operation & Maintenance | Correct malfunctions as soon as practicable | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.6(e)(1)(iii) | Operation & Maintenance | Operation and maintenance requirements independently enforceable; information Administrator will use to determine if operation and maintenance requirements were met | Yes |
| * * * * * | | | |
| § 63.6(e)(3) | Startup, Shutdown, and Malfunction (SSM) Plan (SSMP) | 1. Requirement for SSM and startup, shutdown, malfunction plan 2. Content of SSMP | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.6(f)(1) | Compliance Except During SSM | You must comply with emission standards at all times except during SSM | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| * * * * * | | | |
| § 63.6(h)(1) | Compliance with Opacity/VE Standards | You must comply with opacity/VE emission limitations at all times except during SSM | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.7(e)(1) | Conditions for Conducting Performance Tests | 1. Performance tests must be conducted under representative conditions. Cannot conduct performance tests during SSM 2. Not a violation to exceed standard during | Yes. before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. See § 63.8687. |

| | | | |
|-------------------|--|--|--|
| | | SSM | |
| * * * * * | | | |
| § 63.7(e)(4) | Conduct of performance tests | Administrator's authority to require testing under section 114 of the Act | Yes. |
| * * * * * | | | |
| § 63.8(c)(1)(i) | Routine and predictable CMS malfunction | 1. Keep parts for routine repairs readily available 2. Reporting requirements for CMS malfunction when action is described in SSM plan | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.8(c)(1)(ii) | CMS malfunction not in SSP plan | Keep the necessary parts for routine repairs if CMS | Yes. |
| § 63.8(c)(1)(iii) | Compliance with Operation and Maintenance Requirements | Develop a written startup, shutdown, and malfunction plan for CMS. | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| * * * * * | | | |
| § 63.8(d) | CMS Quality Control | 1. Requirements for CMS quality control, including calibration, etc 2. Must keep quality control plan on record for the life of the affected source 3. Keep old versions for 5 years after revisions | Yes. |
| * * * * * | | | |
| § 63.10(b)(2)(i) | Records related to Startup and Shutdown | Occurrence of each of operation (process equipment) | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.10(b)(2)(ii) | Recordkeeping Relevant to Malfunction Periods and CMS | Occurrence of each malfunction of air pollution equipment | Yes before [date 181 days after date of publication of final rule in the Federal |

| | | | |
|--------------------|---|---|--|
| | | | Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.10(b)(2)(iii) | Recordkeeping Relevant to Maintenance of Air Pollution Control and Monitoring Equipment | Maintenance on air pollution control equipment | Yes. |
| § 63.10(b)(2)(iv) | Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS | Actions during startup, shutdown, and malfunction | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| § 63.10(b)(2)(v) | Recordkeeping Relevant to Startup, Shutdown, and Malfunction Periods and CMS | Actions during startup, shutdown, and malfunction | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| * * * * * | | | |
| § 63.10(d)(5) | Startup, Shutdown, and Malfunction Reports | Contents and submission | Yes before [date 181 days after date of publication of final rule in the Federal Register]. No on and after [date 181 days after date of publication of final rule in the Federal Register]. |
| * * * * * | | | |

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