

The EPA Administrator, E. Scott Pruitt, signed the following notice on 08/07/2017, and EPA is submitting it for publication in the *Federal Register* (FR). While we have taken steps to ensure the accuracy of this Internet version of the rule, it is not the official version of the rule for purposes of compliance. Please refer to the official version in a forthcoming FR publication, which will appear on the Government Printing Office's FDSys website (<http://gpo.gov/fdsys/search/home.action>) and on Regulations.gov (<http://www.regulations.gov>) in Docket No. EPA-HQ-OAR-2012-0133. Once the official version of this document is published in the FR, this version will be removed from the Internet and replaced with a link to the official version.

**6560-50-P**

## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 63**

**[EPA-HQ-OAR-2012-0133, FRL-XXXX]**

**RIN 2060-AS79**

### **National Emission Standards for Hazardous Air Pollutants: Manufacture of Amino/Phenolic Resins**

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

**ACTION:** Proposed rule.

**SUMMARY:** On October 8, 2014, the Environmental Protection Agency (EPA) finalized amendments to the National Emission Standards for Hazardous Air Pollutants (NESHAP) for the Manufacture of Amino/Phenolic Resins (APR). Subsequently, the EPA received three petitions for reconsideration of the final rule. The EPA is reconsidering and requesting public comment on issues related to the maximum achievable control technology (MACT) standards for continuous process vents (CPVs) at existing affected sources. The EPA is proposing to revise the MACT standard for back-end CPVs at existing affected sources based on hazardous air pollutant (HAP) emissions test data for back-end CPVs at existing sources for this source category submitted by petitioners. The EPA is also soliciting comments regarding the need to revise the standard for front-end CPVs at existing sources, and to extend the compliance date for the proposed revised emission limit for back-end CPVs at existing sources. Additionally, the EPA is proposing requirements for storage vessels at new and existing sources during periods when an emission

control system used to control vents on fixed roof tanks is undergoing planned routine maintenance. The EPA is seeking comments only on the four issues specifically addressed in this notice: proposed revised back-end CPV MACT standards for existing sources, whether the EPA should modify the front-end CPV MACT standards for existing sources, whether the EPA should extend the compliance date for the proposed revised back-end CPV MACT standards for existing sources, and the proposed work practice standards for storage vessels during planned routine maintenance of emission control systems. In this rulemaking, the EPA is not reopening or requesting comment on any other aspects of the 2014 final amendments to the NESHAP for the Manufacture of APR, including other issues raised in petitions for reconsideration of the 2014 rule. The EPA estimates this proposal, if finalized as proposed, would reduce compliance costs to this industry by \$2.1 million per year, compared to a revised cost estimate of the MACT standard as amended in 2014.

**DATES: *Comments.*** Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**Public Hearing.** If a public hearing is requested by **[INSERT DATE 14 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, then we will hold a public hearing on **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]** at EPA Headquarters, William Jefferson Clinton East Building, 1201 Constitution Avenue, NW, Washington, DC 20004. If a public hearing is requested, then we will provide details about the public hearing on our Web site at: <https://www.epa.gov/stationary-sources-air-pollution/manufacture-aminophenolic-resins-national-emission-standards>. The EPA does not intend to publish another notice in the **Federal Register** announcing any updates on the request for a 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. The last day to pre-register in advance to speak at the public hearing will be **[INSERT DATE 28 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

**ADDRESSES:** *Comments.* Submit your comments, identified by Docket ID No. EPA-HQ-OAR-2012-0133 at <http://www.regulations.gov>. Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from <http://www.regulations.gov>. The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. 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 <http://www.epa.gov/dockets/commenting-epa-dockets>.

**FOR FURTHER INFORMATION CONTACT:** For questions about this proposed action, please contact Mr. Art Diem, Sector Policies and Programs Division (E143-01), Office of Air Quality Planning and Standards, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711; telephone number: (919) 541-1185; fax number: (919) 541-0246; email address: [diem.art@epa.gov](mailto:diem.art@epa.gov). For information about the applicability of the NESHAP to a particular entity, contact Maria Malave, Office of Enforcement and Compliance Assurance, U.S.

Environmental Protection Agency, EPA WJC South Building, Mail Code 2227A, 1200 Pennsylvania Avenue, NW, Washington DC 20460; telephone number: (202) 564-7027; fax number: (202) 564-0050; and email address: *malave.maria@epa.gov*.

**SUPPLEMENTARY INFORMATION:**

*Docket.* The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2012-0133. All documents in the docket are listed in the <http://www.regulations.gov> index. Although listed in the index, some information is not publicly available, *e.g.*, CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available either electronically at <http://www.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-2012-0133. The EPA's policy is that all comments received will be included in the public docket without change and will be made available online at <http://www.regulations.gov>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit information that you consider to be CBI or otherwise protected through <http://www.regulations.gov> or email. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), Office of Air Quality Planning and Standards, U.S. Environmental Protection

Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2012-0133. Clearly mark the part or all of the information that you claim to be CBI. For CBI information on a disk or CD-ROM that you mail to the EPA, mark the outside of the disk or CD-ROM as CBI and then identify electronically within the disk or CD-ROM the specific information you claim as CBI. In addition to one complete version of the comment that includes information claimed as CBI, you must submit a copy of the comment that does not contain the information claimed as CBI for inclusion in the public docket. Information so marked will not be disclosed except in accordance with procedures set forth in the Code of Federal Regulations (CFR) at 40 CFR part 2.

The <http://www.regulations.gov> Web site is an “anonymous access” system, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <http://www.regulations.gov>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you include your name and other contact information in the body of your comment and with any electronic 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 avoid the use of special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA’s public docket, visit the EPA Docket Center homepage at <http://www.epa.gov/dockets>.

*Preamble Acronyms and Abbreviations.* Multiple acronyms and terms are used 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:

APR	Amino/phenolic resin
CAA	Clean Air Act
CBI	Confidential Business Information
CFR	Code of Federal Regulations
CPV	Continuous process vent
EPA	Environmental Protection Agency
FR	Federal Register
HAP	Hazardous air pollutants
HON	Hazardous Organic NESHAP
ICR	Information collection request
lb	Pound
MACT	Maximum achievable control technology
NESHAP	National emissions standards for hazardous air pollutants
OAQPS	Office of Air Quality Planning and Standards
OMB	Office of Management and Budget
PRD	Pressure relief device
ppmv	Parts per million by volume
RTO	Regenerative thermal oxidizer
RTR	Residual risk and technology review
UFC	Urea formaldehyde concentrate
UPL	Upper predictive limit

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

#### I. General Information

- A. What is the source of authority for the reconsideration action?*
- B. Does this action apply to me?*
- C. Where can I get a copy of this document and other related information?*

#### II. Background

- A. Why is the EPA issuing this proposed reconsideration action?*
- B. What are the issues raised by petitioners about the standards for CPVs at existing affected sources?*

#### III. Proposed Emissions Standards for Back-End CPVs at Existing Sources

- A. What data were collected for back-end CPVs on resin spray dryers?*
- B. What analyses were conducted for back-end CPVs?*
- C. Should the EPA provide facilities more time to comply with the proposed revised back-end CPV standards?*

#### IV. What Other Changes or Issues Does this Action Address?

- A. Should the EPA promulgate a separate standard for front-end CPVs at existing sources?*

- B. Proposed work practice standards for storage vessels at new and existing sources during planned routine maintenance of emission control systems*
- V. Summary of Cost, Environmental, and Economic Impacts
  - A. What are the affected sources?*
  - B. What are the air quality impacts?*
  - C. What are the cost impacts?*
  - D. What are the economic impacts?*
  - E. What are the benefits?*
- VI. Solicitation of Public Comment and Participation
- VII. Statutory and Executive Order Reviews
  - A. Executive Order 12866: Regulatory Planning and Review and Executive Order 13563: Improving Regulation and Regulatory Review*
  - B. Paperwork Reduction Act (PRA)*
  - C. Regulatory Flexibility Act (RFA)*
  - D. Unfunded Mandates Reform Act (UMRA)*
  - E. Executive Order 13132: Federalism*
  - F. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments*
  - G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks*
  - H. Executive Order 13211: Actions Concerning Regulations that Significantly Affect Energy Supply, Distribution, or Use*
  - I. National Technology Transfer and Advancement Act (NTTAA)*
  - J. Executive Order 12898: Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations*

## **I. General Information**

- A. What is the source of authority for the reconsideration action?*

The statutory authority for this action is provided by sections 112 and 307(d)(7)(B) of the Clean Air Act (CAA) (42 U.S.C. 7412 and 7607(d)(7)(B)).

- B. Does this action apply to me?*

Categories and entities potentially regulated by this action include, but are not limited to, facilities having a North American Industry Classification System (NAICS) code 325211. Facilities with this NAICS code are described as plastics material and resin manufacturing establishments, which includes facilities engaged in manufacturing amino resins and phenolic resins, as well as other plastic and resin types.

To determine whether your facility is affected, you should examine the applicability criteria in 40 CFR 63.1400 of subpart OOO. If you have any questions regarding the applicability of any aspect of the NESHAP, please contact the appropriate person listed in the preceding **FOR FURTHER INFORMATION CONTACT** section of this preamble.

*C. 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. 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-2012-0133). 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/manufacture-aminophenolic-resins-national-emission-standards>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of this proposal at this same Web site. Other key technical documents related to this proposal will be available in the docket when the **Federal Register** version of the proposal is posted to the docket. Only the version as published in the **Federal Register** will represent the official EPA proposal.

## **II. Background**

*A. Why is the EPA issuing this proposed reconsideration action?*

On October 8, 2014, the EPA completed the residual risk and technology review (RTR) of the January 20, 2000, APR MACT standards (65 FR 3276), and published its final rule amending the NESHAP for the APR Production source category at 40 CFR part 63, subpart OOO. That action also amended the NESHAP for the Acrylic and Modacrylic Fibers Production source category and the Polycarbonate Production source category at 40 CFR part 63, subpart YY (79 FR 60898). The 2014 final rule established MACT standards for the first time for CPVs



at existing affected sources in the APR Production source category. The 2014 final rule also removed exemptions for periods of startup, shutdown, and malfunction; clarified provisions pertaining to open-ended valves and lines; added monitoring requirements for pressure relief devices (PRDs); and added requirements for electronic reporting of performance test results.

The October 2014 amendments to 40 CFR part 63, subpart OOO, promulgated emissions limits for previously unregulated HAP emissions from CPVs at existing affected sources, without distinguishing between back-end and front-end CPVs. The standard of 0.95 kilograms of organic HAP per megagram (1.9 pounds (lb) of total organic HAP per ton) of resin produced is codified at 40 CFR 63.1405(a)(3) and currently applies to existing affected source back-end and front-end CPVs.

Following promulgation of the October 8, 2014, final rule, the EPA received three petitions for reconsideration pursuant to section 307(d)(7)(B) of the CAA. The petitions were submitted by the Sierra Club, Tembec BTL SR (“Tembec”), and Georgia-Pacific LLC (“Georgia-Pacific”). The petitions are available for review in the rulemaking docket (see Docket Document ID Nos. EPA-HQ-OAR-2012-0133-0077, EPA-HQ-OAR-2012-0133-0076, and EPA-HQ-OAR-2012-0133-0072, respectively). On March 27, 2015, the EPA issued letters to the petitioners granting reconsideration of the final rule to address at least the following petitioners’ claims: that the public was not afforded a reasonable opportunity to comment on the MACT floor analysis, supporting data and resulting emission standards for CPVs at existing sources; and that the requirements associated with emissions from PRDs should be reconsidered.<sup>1</sup> These letters are also available in the rulemaking docket (see Docket Document ID Nos. EPA-HQ-OAR-2012-

---

<sup>1</sup> A petitioner requested another change in the rule language regarding planned routine maintenance of emission control systems used to reduce HAP emissions from storage vessels. Although this issue was not addressed in the March 2015 letters granting reconsideration, the EPA has reconsidered the storage vessel requirements and is addressing these requirements in this proposal. See section IV of this preamble for more details. This document is a prepublication version, signed by EPA Administrator, E. Scott Pruitt on 08/07/2017. We have taken steps to ensure the accuracy of this version, but it is not the official version.

0133-0075, EPA-HQ-OAR-2012-0133-0073, and EPA-HQ-OAR-2012-0133-0074, respectively).

The Agency is now proposing revised emissions standards for back-end CPVs at existing affected sources and is proposing alternative work practice standards for storage vessels during periods of planned routine maintenance of emission control systems on fixed roof tanks at new and existing affected APR production sources. The EPA is requesting public comments on these proposed standards. The EPA is also asking for comments on whether it is necessary to establish a new compliance date for the proposed revised back-end CPV limits at existing sources (if they are promulgated), and on whether revisions are needed to the existing source CPV limits as they apply to front-end CPVs. At this time, the EPA is not proposing any actions pertaining to its grant of reconsideration on the PRD issues raised in the petitions for reconsideration. The EPA intends to address those issues separately in a future action and is not requesting or accepting comment on issues related to PRDs.

*B. What are the issues raised by petitioners about the standards for CPVs at existing affected sources?*

#### 1. Opportunity to Comment on Final Production-Based Standards for CPVs at Existing Affected Sources

During the review of the APR NESHAP, the EPA determined that there were no applicable MACT standards for CPVs located at existing affected sources, and, therefore, in the January 9, 2014 (79 FR 1676), RTR proposal for the category, the EPA proposed first-time MACT standards, based on the MACT floor, for those CPVs as follows:

- Reduce organic HAP by 85 percent or more; or

- Limit the concentration of organic HAP to 20 parts per million by volume (ppmv) when using a combustion control device; or
- Limit the concentration of organic HAP to 50 ppmv when using a non-combustion control device.

During the comment period on the proposal, commenters provided the EPA with information showing that, rather than the two existing affected sources in the category with CPVs (specifically, CPVs on resin spray dryers) that the EPA had identified at proposal, there are four existing affected sources with a total of six CPVs (all on resin spray dryers). In addition, commenters stated that the EPA should calculate uncontrolled production-based emission rates based on 5 years of production, taking variability in emissions between resin types into account. Commenters provided the EPA with HAP emissions data and resin production data for the previous 5 years during the comment period.

The EPA considered the additional data submitted during the comment period in calculating the MACT floor, and determined that it was appropriate to finalize a production-based limit of 1.9 lb of HAP per ton of resin produced for CPVs at existing affected sources (see 40 CFR 63.1405(a)(3)). The EPA discussed the determination of the MACT floor in a memorandum available in the rulemaking docket (Docket Document ID No. EPA-HQ-OAR-2012-0133-0053). The final rule was promulgated on October 8, 2014 (79 FR 60898).

Petitioners Tembec and Georgia-Pacific each own resin spray dryers (back-end CPVs) regulated by the NESHAP for existing affected sources. The back-end CPVs are currently subject to the finalized limit of 1.9 lb of HAP per ton of resin produced. Tembec's and Georgia-Pacific's petitions claim they did not have an opportunity to comment on the MACT floor analysis and emissions standard in the final rule. While they stated in the petitions that they

believe a production-based limit is appropriate, they claimed they did not get an opportunity to comment on how the EPA would use the data they provided in analyses conducted to determine the MACT floor level of control.

## 2. MACT Floor Determination for Back-End CPVs at Existing Affected Sources

The Tembec and Georgia-Pacific petitions stated that the production-based emissions limit in the 2014 final rule of 1.9 lb of HAP per ton of resin produced was not achievable for back-end CPVs, and they expressed concern over the data and calculation methodology used to set the HAP emissions standard for CPVs at existing affected sources. Specifically, Tembec stated that even though its back-end CPVs are identified as the best-performing units, these units do not meet the 1.9 lb of HAP per ton of resin produced standard for existing source CPVs.

Tembec and Georgia-Pacific further stated that the emissions data the EPA used to represent Tembec's back-end CPVs were incomplete. According to Tembec and Georgia-Pacific, Tembec's back-end CPV HAP emissions data used in the final rule MACT floor analysis do not account for all HAP emitted, including methanol and formaldehyde. Therefore, petitioners stated that the EPA underestimated the total HAP emissions from these back-end CPVs, resulting in an unreasonably stringent production-based total HAP emissions standard for existing affected sources.

Georgia-Pacific stated in its petition that the EPA made three errors in calculating the production-based HAP limits for CPVs at existing affected sources. First, the petitioner claimed that the promulgated emissions standard does not adequately account for variability in emissions from back-end CPVs. The commenter noted that the EPA calculated the emission rate for each CPV by dividing the 5-year total emissions by the 5-year total amount of resin produced by the corresponding resin unit. The petitioner stated that to account for short-term variability, the EPA

should have based the standard on the maximum 1-year production-based HAP emissions rate for each CPV. Georgia-Pacific also stated that another approach the EPA could have used to account for variability in the data when calculating the production-based HAP emissions limit is the application of a 99-percent upper prediction limit (UPL). Second, Georgia-Pacific disagreed with the EPA's interpretation of "average" as the median rather than the arithmetic mean of the production-based HAP emissions, although it acknowledged the EPA's long-standing interpretation that "average" could mean arithmetic mean, median, or mode. The petitioner stated that using the arithmetic mean would better reflect the performance of Georgia-Pacific's back-end CPVs, whereas the median produced an emissions limit that is not representative of two of the five best-performing back-end CPVs (with the noted two being Georgia-Pacific CPVs). Third, Georgia-Pacific stated that the EPA's emissions calculations do not account for a change in particulate control technology for one of Tembec's back-end CPVs that occurred prior to the 2014 final rule. Georgia-Pacific asserted that HAP emissions from this CPV are now higher with the change in particulate control technology, and the EPA should not have used data from a period with the previous control technology in place when determining production-based HAP emissions from the five best-performing CPVs at existing affected sources.

Georgia-Pacific also suggested in its petition for reconsideration that the EPA should explore subcategorizing the existing source CPVs between those at Tembec and those at Georgia-Pacific to account for fundamental differences in equipment and processes, including dryer size and/or type of resin produced. Georgia-Pacific's resin spray dryers are substantially larger than Tembec's resin spray dryers. Also, Tembec produces urea-formaldehyde resins, whereas Georgia-Pacific produces phenolic resins.

Tembec stated in its petition that the EPA did not consider information Tembec submitted to the EPA in the development of the MACT standard for back-end CPVs at existing sources. Specifically, Tembec stated that 2006 engineering test data for one of its CPVs were submitted to the EPA and could have been used to better estimate the HAP emissions from its three CPVs. Tembec also stated that it supports the Georgia-Pacific petition.

In a comment letter from Georgia-Pacific dated March 10, 2014 (Docket Document ID No. EPA-HQ-OAR-2012-0133-0046), on the January 9, 2014, proposal, Georgia Pacific identified an additional CPV at its Crossett, Arkansas, facility. This newly identified CPV is not on the resin spray dryers. Whereas the resin spray dryers are on the back-end of the resin manufacturing process, this additional CPV is associated with a reactor used to produce urea-formaldehyde concentrate (UFC), which is located in the front-end of the resin manufacturing process, ahead of the resin spray dryers. Due to a lack of reliable emissions data for this CPV at the time of the 2014 final rule, the EPA did not include emissions from this CPV when it set the MACT floor for CPVs. The Sierra Club raised concerns in its petition for reconsideration regarding the exclusion of HAP emissions data from that front-end CPV, stating that the EPA did not adequately explain why the UFC CPV HAP emissions data were not included in the analysis to calculate the MACT floor for CPVs and asserting that the EPA must include all existing sources in the MACT floor analysis. Sierra Club argued that if the EPA had included Georgia-Pacific's UFC front-end CPV, the HAP emissions standard for CPVs would have been more stringent.

Sierra Club asserted in its petition that all the CPVs are in the same source category and that the EPA cannot subcategorize based on the controls that are in place. Sierra Club further noted that although the EPA stated that the HAP emissions data from this front-end CPV were

not reliable, such a statement is insufficient to explain ignoring the HAP emissions from this CPV when setting the MACT standard for CPVs. Lastly, Sierra Club stated that excluding the UFC front-end CPV in the MACT floor analysis because its HAP emissions are not responsible for driving risks is not a relevant reason for such an exclusion.

Following the EPA's issuance of the March 27, 2015, letters granting reconsideration on petitioners' issues pertaining to CPVs, petitioners Tembec and Georgia-Pacific conducted HAP emissions testing on the back-end CPVs located on their resin dryers at their four existing affected sources. The data from that testing are discussed in section III.A of this preamble.

### **III. Proposed Emissions Standards for Back-End CPVs at Existing Sources**

#### *A. What data were collected for back-end CPVs on resin spray dryers?*

Georgia-Pacific and Tembec conducted HAP emissions testing in April 2015 and June 2015 on all six back-end CPVs located on their resin spray dryers, and they submitted the results of that testing to the EPA. Georgia-Pacific separately tested emissions during production of three types of resins at its Conway, North Carolina, facility; two types of resins at the Taylorsville, Mississippi, facility; and one type of resin at the Crossett, Arkansas, facility. Tembec tested emissions from one spray dryer CPV while producing one type of resin and tested emissions during production of two types of resins from the other two resin spray dryer CPVs. The companies followed a testing protocol approved in advance by the EPA, and both companies conducted six 1-hour runs of the back-end CPVs on each resin spray dryer, where possible, yielding a total of 64 runs. The test data indicate that the major HAP present were methanol and formaldehyde. Complete information on the spray dryer back-end CPV exhaust emission testing, including process and operation information, testing protocol and methodology, quality assurance/quality control, and detailed test results are available in the rulemaking docket.

*B. What analyses were conducted for back-end CPVs?*

1. MACT Floor Analysis for Back-end CPVs

We performed a MACT floor analysis for back-end CPVs using the 2015 test data provided by Georgia-Pacific and Tembec. In determining the MACT floor for existing sources, CAA section 112(d)(3) specifies that the emissions limits cannot be less stringent than the average emission limitation achieved by the best-performing 12 percent of existing sources in the category or subcategory (or the best-performing five sources for categories or subcategories with fewer than 30 sources). Since we have identified six existing source dryers in the APR source category, we determined the MACT floor-level of control based on the best-performing five sources. The MACT floor analysis involved determining the UPL emission rate for each dryer CPV, based on the emissions test results for the resin type generating the highest HAP emissions (where multiple resin types were tested). This UPL value takes into account production variability and estimates the upper bound of future values, based on present or past samples. The resulting UPL emission rate values for the six dryers were ranked, and the five lowest values were averaged to produce the MACT floor value.

The EPA considered the petitioner's claim that the arithmetic average rather than the median value should be used in determining the MACT floor. Given the distribution of the data from these sources, the EPA interprets the arithmetic mean to be the better interpretation of "average" for this set of data. If the distribution of the emission rates from each of the dryers had extreme variation or extreme skewness, then the median might be a better indicator of the central tendency or average of the data set. However, given that the data set consists of only five values



(i.e., the UPL of the performance testing results for each of the five best-performing dryers<sup>2</sup>) and given that there is only a slight positive skew of this dataset, there is not enough skewness or variation in this dataset to conclude the median would be a better description of the average over the arithmetic mean.

The EPA also considered how to best account for variability in emissions rates in the MACT floor determination. As each of these sources may produce multiple types (or recipes) of APR (without restriction and without needing any physical modification to the sources), to establish a standard that represents the emissions limit achieved in practice by the best-performing sources, our calculations of the MACT floor are based on the resin resulting in the highest HAP emissions at each of the best-performing sources and the calculated UPL emission rate for production of that highest-HAP emission generating resin at each dryer. In determining the MACT floor for existing sources, the EPA may exercise its judgment, based on an evaluation of the relevant factors and available data, to determine the level of performance that has been achieved by the average of the best-performing sources (in this case, five sources) under variable conditions. The Court has recognized that the EPA may consider variability in estimating the degree of emissions reduction achieved by the best-performing sources and in setting MACT floors, holding the EPA may consider emission variability in estimating performance achieved by best-performing sources and may set the floor at a level that best-performing sources can expect to meet “every day and under all operating conditions.”<sup>3</sup> As a result of its analysis, the EPA has determined that an appropriate MACT floor for back-end CPVs is 8.6 lb of HAP per ton of resin produced. See the memorandum titled “Proposed Revised MACT Floor and Beyond-the-

---

<sup>2</sup> See Table 3 of the memorandum titled “Proposed Revised MACT Floor and Beyond-the-Floor Analysis for Back-End Continuous Process Vents at Existing Sources in the Amino and Phenolic Resins Production Source Category” in this docket.

<sup>3</sup> *Mossville Environmental Action Now v. EPA*, 370 F.3d 1232, (D.C. Cir. 2004).

This document is a prepublication version, signed by EPA Administrator, E. Scott Pruitt on 08/07/2017. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Floor Analysis for Back-End Continuous Process Vents at Existing Sources in the Amino and Phenolic Resins Production Source Category” for more details on this analysis.

The EPA explored Georgia-Pacific’s request in its petition regarding subcategorizing the dryer standards based on dryer size and/or type of resin produced. However, we found no compelling dryer size threshold nor resin type attribution that would provide a suitable rationale for subcategorization of a MACT floor for a back-end CPV standard.

## 2. Beyond-the-Floor Analysis for Back-end CPVs

When establishing an emission standard pursuant to section 112(d) of the CAA, the EPA also determines whether to control emissions to a more stringent level “beyond-the-floor,” after considering the costs, non-air quality health and environmental impacts, and energy requirements of such more stringent control. As part of the beyond-the-floor analysis for existing source back-end CPVs, control options that are more stringent than the MACT floor were considered. We identified one such option for back-end CPVs at existing sources, a 98-percent emissions reduction requirement. For this option, we assumed that regenerative thermal oxidizers (RTOs) would need to be used to achieve this control level at all existing APR sources with back-end CPVs. While we project that two facilities would already need to install RTOs on their back-end CPVs to meet the proposed revised MACT floor emissions limit, for this beyond-the-floor analysis, we evaluated the potential additional installation of RTOs at the other two facilities – one facility would install an RTO to control the back-end CPV on one resin spray dryer and the other facility would install an RTO to control the back-end CPVs on three resin spray dryers.

Table 1 presents the impacts for the MACT floor and the beyond-the-floor options evaluated. Since we are not aware that any of the four facilities have installed controls to comply with the CPV requirements in the 2014 final rule, and since we are aware that at least three of the

facilities have obtained an additional year to comply from their permitting authorities pursuant to 40 CFR 63.6(i), we believe it is appropriate to compare the impacts of the MACT floor and the beyond-the-floor option identified to the 2000 rule compliance baseline. In addition, as explained previously, because the data used to set the production-based HAP emissions limit in the 2014 final rule did not account for all HAP, the cost and emissions impacts determined at the time the EPA issued the 2014 final rule would not be an appropriate basis of comparison. However, we note that using the more complete HAP emissions data now available, the cost and emissions impacts of the 2014 final rule for back-end CPVs would be approximately the same as the cost and emissions impacts of the beyond-the-floor option for back-end CPVs presented in Table 1 because we now project that all four facilities would need to install RTOs to comply with the 2014 final rule for back-end CPVs. More information on how the capital and annualized costs and costs per ton were calculated is available in the memorandum titled “National Impacts Associated with Proposed Existing Source Standards for CPVs and Storage Tanks in the Amino and Phenolic Resins Production Source Category,” available in the rulemaking docket.

Table 1. Nationwide Emissions Reduction and Cost Impacts of Control Options for Back-End CPVs at Existing APR Facilities

Regulatory options	HAP emissions reduction (tons per year) compared to 2000 rule	Capital cost (million \$)	Annualized cost (\$/yr)	Cost effectiveness (\$/ton HAP removed)	Incremental cost effectiveness (\$/ton HAP removed)
MACT floor	207	4.8	2.1	10,400	-----
Beyond-the-floor <sup>4</sup>	271	9.6	4.2	15,500	33,000

<sup>4</sup> Beyond-the-floor would be essentially the same level of control as the 2014 final rule, with revised estimates of the costs and HAP emissions reduction based on the 2015 test data of back-end CPVs at existing sources. This document is a prepublication version, signed by EPA Administrator, E. Scott Pruitt on 08/07/2017. We have taken steps to ensure the accuracy of this version, but it is not the official version.

Essentially, the beyond-the-floor option reflects a doubling of capital and annualized costs compared to the MACT floor option, while obtaining an additional HAP reduction of only 31-percent beyond the MACT floor option. Based on this analysis, we do not consider the beyond-the-floor option to be cost effective. Therefore, we are not proposing any beyond-the-floor standards. Instead, we are proposing to establish production-based HAP emission limits for back-end CPVs at existing APR production sources, at the level we have now determined is the correct MACT floor (*i.e.*, 8.6 lb of HAP per ton of resin produced).

### 3. Proposed Amendments to Compliance Demonstration Procedures

Facilities in the APR Production source category produce a wide variety of resin recipes as needed to meet the specifications of various products in which these resins are used. As a result, the characteristics of the resins passing through the dryers where the back-end CPVs are located can vary at a facility. In order to ensure that APR sources monitor operating parameters at a level that ensures continuous compliance with the proposed MACT standards for back-end CPVs under any and all operating conditions, we are also proposing to amend 40 CFR 63.1413 to require sources to conduct the performance testing using the resin recipes anticipated to have the highest HAP content in the liquid resin.

### 4. Consideration of Risk Review

In the risk assessment for the 2014 final rule, we determined that the APR MACT standards promulgated in January 2000 provide an ample margin of safety to protect public health (including the then-uncontrolled emissions from CPVs at existing sources). See Residual Risk Assessment for the Amino/Phenolic Resins Production Source Category, Docket Document ID No. EPA-HQ-OAR-2012-0133-0065. Although the data set used to establish the MACT production-based emission limits for CPVs at existing sources in the 2014 final rule did not

include data on all HAP, the risk assessment modeling input files for the 2014 final rule show that emissions of all HAP, including methanol and formaldehyde, from the CPVs at the existing sources were accounted for, except for the non-reactor front-end CPV at the INEOS Melamines facility. At the INEOS Melamines facility, the 2014 risk modeling estimates a maximum individual risk of 0.4-in-1 million attributable to the APR source at the INEOS facility, with the risk driver identified as formaldehyde, and the risk modeling input files include 0.375 tons per year of formaldehyde emissions. The information collected from INEOS regarding its non-reactor front-end CPV indicates annual emissions of formaldehyde at less than 0.03 tons per year. Given the low risk estimate for the facility, we consider this small increase in emissions to be insignificant, and the estimated facility risk would be about the same (less than 1-in-1 million). Thus, we would not anticipate the inclusion of a revised emissions estimate for the INEOS facility would change the 2014 risk assessment results for the facility or the APR Production source category, and we have determined that additional quantitative risk analyses are not necessary.

*C. Should the EPA provide facilities more time to comply with the proposed revised back-end CPV standards?*

We are soliciting comments on whether existing facilities would need additional time to comply with the proposed revised back-end CPV standards, if the revisions to those standards are promulgated. The current compliance date in the 2014 final rule is October 9, 2017. The APR NESHAP at 40 CFR 63.1401(d) provides the opportunity for existing facilities, on a case-by-case basis, to request an extension from their permitting authorities for up to 1 additional year to comply, if necessary, to install controls to meet a standard. We anticipate that two existing facilities would need to install control devices to comply with the proposed revised back-end

CPV emissions standards. Industry has indicated that at least 18 months would be needed to install controls, once the proposed rule is finalized, and a 1-year extension of the October 9, 2017, compliance date, if granted, would require compliance in less than 18 months from any promulgation date of the revised back-end CPV standards (given the date of this proposal). We are soliciting comments on whether to maintain the current compliance date, anticipating that case-by-case extension requests may be made, or if the compliance date should be established for another date. If it is appropriate to establish a different compliance date, we are soliciting comments on an appropriate date, such as a date 18 months after promulgation of the revised standards, the date 18 months beyond the original October 9, 2017, compliance date, or some other date.

#### **IV. What Other Changes or Issues Does this Action Address?**

##### *A. Should the EPA promulgate a separate standard for front-end CPVs at existing sources?*

In the APR Production source category, CPVs are found in both the back-end and front-end of the resins production process. Back-end CPVs are associated with APR production operations related to processing liquid resins into a dry form. Back-end process operations include, but are not limited to, flaking, grinding, blending, mixing, drying, pelletizing, and other finishing operations, as well as latex and crumb storage. Front-end CPVs are associated with the part of an APR process unit related to producing liquid resins, including any product recovery, stripping, and filtering operations. Front-end CPVs can be further distinguished as being reactor CPVs or non-reactor CPVs. A reactor front-end CPV receives air streams originating from a reactor, whereas a non-reactor front-end CPV receives air streams originating from a unit operation other than a reactor. Examples of non-reactor front-end CPV unit operations include

filter presses, surge control vessels, bottoms receivers, weigh tanks, holding tanks, and distillation systems.

The EPA has identified two APR Production existing sources that have front-end CPVs. One is Georgia-Pacific's facility in Crossett, Arkansas, and the other is an INEOS Melamines facility in Springfield, Massachusetts. Georgia-Pacific has a front-end reactor CPV that handles air streams originating from the reactor associated with the manufacture of UFC. This front-end CPV is controlled with an RTO that achieves a HAP control efficiency of 95 percent or more and also controls HAP emissions from other processes at the facility. The EPA became aware of this front-end CPV through comments on the 2014 proposed rulemaking, but had limited information about this front-end CPV at the time of the final rule. INEOS Melamines has a front-end non-reactor CPV that handles air streams from the formaldehyde recovery process associated with their amino resins production process. This front-end CPV is routed to a scrubber, which was installed primarily for control of particulate matter emissions. The EPA was not aware of this front-end CPV unit during the 2014 rulemaking, but learned of it in 2015 from communications with the Massachusetts Department of Environmental Protection. We are not aware of any other front-end CPVs at any of the other existing sources in the APR Production source category.

Since the air emission streams from these two front-end CPVs have different characteristics, such as different flow rates and HAP concentrations, and are vents for dissimilar types of equipment and would likely require different control approaches, we are soliciting comments on, but not yet proposing, whether standards for these front-end CPVs should be revised from the currently applicable CPV standard of 1.9 lb of HAP per ton of resin produced and subcategorized into two types – reactor and non-reactor front-end CPVs. Separate standards for the two types of front-end CPVs would be consistent with how reactor and non-reactor vents

have been regulated by the EPA for batch processes for the APR Production source category – see 40 CFR 63.1406 Reactor Batch Process Vent Provisions and 40 CFR 63.1407 Non-reactor Batch Process Vent Provisions. We are not proposing separate standards for front-end CPVs on reactors and non-reactors at this time because we are uncertain as to whether we have identified the only two front-end CPVs in the source category or whether the data for these two CPVs would be appropriate to revise the currently applicable CPV standards and establish front-end CPV standards for the source category if there are other front-end CPVs at existing affected sources. Therefore, we are seeking comment on whether there are other reactor or non-reactor front-end CPVs at existing affected sources. For any such front-end CPVs, we are further seeking information regarding current HAP emissions, emissions controls, and control costs. If there are no other reactor or non-reactor front-end CPVs at existing affected sources or if no additional data are provided for any such CPVs, it is possible that the EPA would consider, in lieu of leaving front-end CPVs at existing sources subject to the currently applicable CPV standards, adopting final revised standards that could apply to front-end CPVs at existing sources, as discussed below.

Based on the analyses presented below, we could establish separate existing APR Production source standards for front-end CPVs on reactors and for front-end CPVs on non-reactors, based on the MACT floor. We are soliciting comments on whether the EPA should maintain the 2014 final rule CPV emissions standards that currently apply to front-end CPVs (1.9 lb of HAP per ton of resin produced), whether the EPA should replace these standards for front-end CPVs with standards specific to front-end CPVs as discussed in this section, or whether the EPA should set different revised front-end CPV standards based on additional information about additional front-end CPVs that the EPA has not yet obtained.



## 1. Data Collected for Front-end CPVs

On November 30, 2015, the EPA requested process information and emissions data for front-end CPVs at Georgia-Pacific's Crossett and INEOS Melamines' resin production facilities via a CAA section 114 survey. Georgia-Pacific has another formaldehyde and resin manufacturing facility located in Columbus, Ohio, for which Georgia-Pacific also provided information in their survey submittal. Although the Columbus facility is an area source not subject to the APR MACT standards, Georgia-Pacific provided the data to help clarify emissions that would be expected from the front-end CPV due to APR production at the Georgia-Pacific facility in Crossett, Arkansas, where the front-end CPV at this facility handles streams from both APR and non-APR production sources, since the Columbus and Crossett resin manufacturing operations are similar. The EPA received responses from Georgia-Pacific on February 9, 2016, and responses from INEOS Melamines on January 11, 2016, with additional information on May 23, 2016. The CAA section 114 survey and the survey responses received from Georgia-Pacific and INEOS Melamines can be found in the rulemaking docket.

## 2. MACT Floor and Beyond-the-floor Analysis for Front-end CPVs

We performed separate MACT floor analyses for reactor and non-reactor front-end CPVs at existing sources using the 2016 CAA section 114 survey data provided by Georgia-Pacific and INEOS Melamines.

For front-end reactor CPVs at existing sources, we are aware of one major source facility with a front-end reactor CPV subject to the APR NESHAP, which is a Georgia Pacific facility in Crossett, Arkansas. Georgia-Pacific also submitted data for a facility in Columbus, Ohio, which is a synthetic area source and is not subject to the APR NESHAP. Consistent with the EPA's longstanding policy and with prior rulemakings where the EPA has included data from synthetic

area sources in MACT floor calculations,<sup>5</sup> data for the front-end CPVs at both the synthetic area source and the major source were included in the MACT floor calculations for reactor front-end CPVs. Based on our analysis of the data provided by Georgia Pacific for these facilities, we have determined that the MACT floor for front-end reactor CPVs at existing sources would be 0.61 lb of HAP per hour.<sup>6</sup>

For front-end non-reactor CPVs at existing sources, we are aware of one major source facility with a front-end non-reactor CPV subject to the APR NESHAP, which is INEOS Melamines in Springfield, Massachusetts. As there is only one front-end CPV in this subcategory, the emissions level currently being achieved by this CPV represents the MACT floor for the subcategory. Based on our analysis of the data provided by INEOS Melamines for this front-end CPV, we have determined that the MACT floor for front-end non-reactor CPVs at existing sources would be 0.022 lb of HAP per hour.<sup>7</sup>

We also conducted a beyond-the-floor analysis for reactor and non-reactor front-end CPVs at existing sources using the 2016 CAA section 114 survey data. For front-end reactor CPVs, HAP emissions from the CPVs at both facilities are controlled with RTOs, and we have not identified any other technology that would perform better. Therefore, there is no beyond-the-floor option to evaluate.

For front-end non-reactor CPVs at existing sources, the CPV at the INEOS Melamines facility is currently controlled with a scrubber, and we assumed carbon adsorption would be a

---

<sup>5</sup> See, e.g., NESHAP for Municipal Solid Waste Landfills, 68 FR 2227, 2232 (January 16, 2003); NESHAP for Brick and Structural Clay Products Manufacturing and NESHAP for Clay Ceramics Manufacturing, 68 FR 26690, 26697 (May 16, 2003); NESHAP for Polyvinyl Chloride and Copolymers Production, 77 FR 22848, 22876 (April 17, 2012).

<sup>6</sup> The EPA did not select a production-based format for the MACT floor because front-end equipment may not produce finished resin products and relating the output of front-end equipment to tons of finished resin produced may be difficult for compliance purposes.

<sup>7</sup> See footnote 5.

technically feasible control technology that would reduce HAP emissions. We estimated the total annualized costs of adding carbon adsorption to be approximately \$9,000 per year and the control would achieve an additional reduction of 0.04 tons of HAP per year, resulting in a cost of approximately \$225,000 per ton of HAP removed beyond the MACT floor level of control. Based on the high costs and low additional emissions reduction possible with this control, we have determined that this beyond-the-floor option is not reasonable. More information on these MACT floor and beyond-the-floor analyses are available in the memorandum titled “MACT Floor and Beyond-the-Floor Analyses for Front-End Continuous Process Vents at Existing Sources in the Amino and Phenolic Resins Production Source Category” in the rulemaking docket.

*B. Proposed work practice standards for storage vessels at new and existing sources during planned routine maintenance of emission control systems*

In the 2014 final rule, we removed the exemption from emissions standards for periods of startup, shutdown and malfunction in accordance with a decision of the United States Court of Appeals for the District of Columbia Circuit, *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), *cert. denied*, 130 S. Ct. 1735 (U.S. 2010). This decision stated that the EPA must have standards in place at all times, even during periods of startup, shutdown and malfunction. As a result, the storage vessel provisions in the APR NESHAP at 40 CFR 63.1404 apply at all times. In their petition for reconsideration, Georgia-Pacific requested that the EPA reconsider the applicability of the storage vessel HAP emissions standards when the emission control system for the vent on a fixed roof storage vessel is shut down for planned routine maintenance.

In the 2014 final rule, we established storage vessel capacity and vapor pressure applicability thresholds for storage vessels at new and existing sources, consistent with the

thresholds established for the chemical industry regulated by the Hazardous Organic NESHAP for Synthetic Organic Chemical Manufacturing Industry (HON). Georgia Pacific stated in its petition for reconsideration of the 2014 final rule that to meet the goal of being wholly consistent with the HON storage vessel standards, the EPA also should include the HON storage vessel allowance for routine maintenance of an emission control system in the rule. The HON includes provisions at 40 CFR 63.119(e)(3) and (f)(3) that allow an affected source to bypass the storage vessel emission control system for up to 240 hours per year to perform planned routine maintenance of the emission control system. The emission control system could be an emission control device, fuel gas system, or process. The petitioner stated that these provisions would ensure consistency and are needed because the effort to empty and degas a tank to perform this maintenance could result in greater HAP emissions than would occur if a limited allowance or exception were provided.

To determine whether separate MACT standards should be established for periods of planned routine maintenance of the emission control system for the vent on a fixed roof tank at a new or existing source, we reviewed the title V permits for each facility subject to the APR NESHAP. In this review, we searched for facilities that had storage vessels subject to the emissions standards of the APR NESHAP and for any permit requirements pertaining to periods of routine maintenance of a control device for a storage vessel. From the review, several facilities were found to have storage vessels subject to the APR NESHAP emission standards, and two facilities had permit conditions for periods of time when the storage vessel control device was not operating. One facility had requirements that emissions be routed to a different control device, which normally operates at the facility for other processes, during planned outages of the primary control device for the storage vessel. At this facility, when both control

devices are not operating, there are requirements that the storage vessels not be filled during these times, eliminating working loss emissions. The other facility had requirements for one storage vessel that specify it could not be filled when its emission control system was not operating. The reviewed title V permits also indicate that some APR facilities are co-located with storage vessels subject to the HON (or have storage vessels that serve both APR and HON operations, but are subject to the HON due to predominant use).

We also reviewed other chemical production NESHAP to determine requirements that apply to similar storage vessels. From the review of these NESHAP, we found that the HON and several other NESHAP, including, but not limited to, those for Group I Polymers and Resins, Group IV Polymers and Resins, Off-Site Waste and Recovery Operations, Pharmaceuticals Production, and Pesticide Active Ingredient Production with similar vapor pressure and threshold capacities had provisions that minimized HAP emissions during periods of planned routine maintenance. Provisions minimized HAP emissions by limiting the duration of the planned routine maintenance to 240 hours per year. The Pharmaceuticals Production and Pesticide Active Ingredient Production NESHAP allow a facility to request an extension of up to an additional 120 hours per year on the condition that no material is added to the tank during such requested extension period. Based on our review of these permits and NESHAP, we have determined that a separate work practice standard that allows owners/operators up to 240 hours per year during planned routine maintenance of the emission control system, provided that there are no working losses from the vessel, represents the MACT floor level of control for fixed roof tank vents at new and existing APR sources.

We evaluated the 2014 final rule's requirement that the storage vessel work practice standard at new and existing APR sources apply at all times (with no separate work practice

standards for periods of planned routine maintenance of the emission control system) as a beyond-the-floor control option. To comply with this option (*i.e.*, the current rule's storage tank requirements), we anticipate that backup controls would likely be installed to ensure compliance with the storage vessel requirements during periods of planned routine maintenance of the primary emission control system. We estimate that there are one to 15 sources in the category that would need to control one or more storage vessels during periods when the primary emission control system is undergoing planned routine maintenance. We estimate that carbon canisters would be the emission control devices used for two storage vessels at each facility. We estimate these control devices would have an annualized cost of \$830 per year per facility and would reduce 240 hours of breathing losses of 0.013 tons of HAP per year per facility, at a cost of \$62,400 per ton of HAP emissions reduced. We view the costs of this beyond-the-floor option as not being cost effective.

Based on this analysis, we are proposing amendments to the currently applicable storage vessel work practice standard provisions for new and existing affected sources that would establish separate work practice standards for periods of planned routine maintenance of an emission control system that is used to comply with HAP emissions standards for vents on fixed roof tanks. The proposed amendments would permit owners and operators of fixed roof tanks at new and existing affected APR sources to bypass the emission control system for up to 240 hours per year during planned routine maintenance of the emission control system, provided that there are no working losses from the fixed roof tank. To prevent HAP emissions from working losses, owners/operators would not be permitted to add material to the tank during these planned routine maintenance periods. Under this provision, the storage vessel would emit HAP to the atmosphere for a limited amount of time due to breathing losses only, which we expect to be a much lower

HAP emission rate than if there were also working losses resulting from filling the vessel. The proposed separate work practice standards for periods of planned routine maintenance of the emission control system would result in slightly higher HAP emissions (approximately 0.013 tons per year per facility) than would occur under the current work practice standards for storage vessels in the 2014 final rule and would reduce annualized costs of approximately \$830 per year per facility.

We are soliciting comments on these proposed work practice standards for storage vessels at new and existing APR sources and whether they represent practices by the best-performing sources in the APR Production source category. We are soliciting comments on whether there are other practices that should be considered in establishing the work practice standards for periods of planned routine maintenance of the emission control system for storage vessels at existing and new APR sources. We are also soliciting comments on whether we have accurately estimated the HAP emissions and costs compared to the work practice standards for storage vessels at new and existing sources in the 2014 final rule.

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

### *A. What are the affected sources?*

We estimate that four to 15 existing sources would be affected by one or more of the revised requirements being proposed in this action. We expect four existing sources to be affected by the proposed revised back-end CPV requirements. We expect one to 15 existing affected sources to be affected by the proposed work practice standards for periods of planned routine maintenance of an emission control system that is used to comply with emissions standards for vents on fixed roof tanks. We anticipate that some of these existing affected sources could be affected by more than one of the proposed requirements.

*B. What are the air quality impacts?*

We are proposing a revised standard of 8.6 lb of HAP per ton of resin produced for back-end CPVs at existing sources. We project that the proposed standard would result in an estimated reduction of 207 tons of HAP per year beyond the January 2000, APR MACT standards. As discussed previously in section III.B.2 of this preamble, the production-based emissions limit for existing source CPVs in the 2014 final rule was established based on incomplete HAP emissions data. However, if facilities were to comply with that 2014 final rule, we estimate a reduction of 271 tons per year of HAP emissions using the revised HAP emissions estimates based upon the 2015 test data.

In the 2014 final rule, we removed the exemptions from standards that applied during periods of startup, shutdown, and malfunction. In the absence of separate work practice standards that would apply during these times, affected sources are now required to meet the storage vessel work practice standards during periods when the emission control system for the vent on a fixed roof storage tank is shut down for planned routine maintenance by routing storage vessel vents to a back-up control device, resulting in an estimated decrease of 0.013 tons of HAP per year per facility beyond the January 2000 APR MACT standards. The proposed work practice standards we are proposing in this action would preclude the need to install back-up controls for these vessels. We anticipate that the proposed revised work practice standards would reduce HAP emissions from those allowed under the January 2000 APR MACT standards as a result of preventing working losses by not filling the tank during planned routine maintenance of the control device and as a result of limiting the annual duration of the maintenance period; however, the HAP emissions reduction may be slightly less than the 0.08 tons of HAP per year projected under the 2014 final rule.



*C. What are the cost impacts?*

For back-end CPVs at existing affected sources, we are proposing a revised standard of 8.6 lb of HAP per ton of resin produced. We project that back-end CPVs at two existing affected sources would require emissions controls to meet the proposed revised standard. For cost purposes, we assumed that each facility would install an RTO. Based on discussions with Georgia-Pacific and Tembec, we understand that the facilities are exploring other options, such as process changes, that may be more cost effective. However, the technical feasibility and potential costs of these options are currently unknown, and our estimate of compliance costs, assuming the use of RTOs, is based on the best information available. We estimate the nationwide capital costs to be \$4.8 million and annualized costs to be \$2.1 million per year. These costs are additional to the 2000 rule, which did not regulate CPVs at existing sources. Compared to our revised estimate of the 2014 final rule costs of \$9.6 million in capital costs and annualized costs of \$4.2 million,<sup>8</sup> the proposed revised standard represents an approximate 50-percent reduction in industry-wide costs.

We estimated the nationwide annualized cost reductions associated with the proposed work practice standard for periods of planned routine maintenance of an emission control system that is used to comply with emissions standards for vents on fixed roof tanks. Compared to our revised estimate of the 2014 final rule costs,<sup>9</sup> the proposed storage vessel work practice standards result in an annualized cost reduction for each facility of \$830 per year, which includes capital cost reduction of \$1,600. We estimate the nationwide annualized cost reduction to be up to \$12,450 per year based on an estimated 15 facilities.

---

<sup>8</sup> See memorandum “National Impacts Associated with Proposed Standards for CPVs and Storage Tanks in the Amino and Phenolic Resins Production Source Category,” which is available in the rulemaking docket.

<sup>9</sup> Same as footnote 8.

*D. What are the economic impacts?*

We performed a national economic impact analysis for APR production facilities affected by this proposed rule. We anticipate that two existing affected sources would install RTOs to comply with this proposed rule at a total annualized cost of \$2.1 million (in 2014\$) per year compared to the 2000 rule. These total annualized costs of compliance are estimated to be approximately 0.002 percent of sales. Accordingly, we do not project that this proposed rule would have a significant economic impact on the affected entities.

The estimated total annualized cost of this proposal can also be compared to the estimated cost for the industry to comply with the 2014 final rule. Based on information received since the 2014 rule was finalized, we developed a revised estimate of the cost to comply with the 2014 final rule. We estimate the revised annualized cost of complying with the 2014 final rule to be \$4.2 million per year.<sup>10</sup> Compared to this revised estimate of the cost of compliance with the 2014 final rule, this proposal would provide regulatory relief by reducing annualized compliance costs by \$2.1 million.

More information and details of this analysis, including the conclusions stated above, are provided in the technical document, “Economic Impact Analysis for the Proposed Amendments to the NESHAP for Amino/Phenolic Resins,” which is available in the rulemaking docket.

*E. What are the benefits?*

We estimate that this proposed rule would result in an annual reduction of 207 tons of HAP, compared to the pre-2014 baseline. These avoided emissions will result in improvements in air quality and reduced negative health effects associated with exposure to air pollution of

---

<sup>10</sup> See Table 3 and Table 4, Memorandum “National Impacts Associated with Proposed Standards for CPVs and Storage Tanks in the Amino and Phenolic Resins Production Source Category,” which is available in the rulemaking docket.

This document is a prepublication version, signed by EPA Administrator, E. Scott Pruitt on 08/07/2017. We have taken steps to ensure the accuracy of this version, but it is not the official version.

these emissions; however, we have not quantified or monetized the benefits of reducing these emissions for this rulemaking. See section V.B of this preamble for discussion of existing source CPV HAP emissions under this proposed rule compared to the 2014 final rule.

## **VI. Solicitation of Public Comment and Participation**

The EPA seeks public comments on the issues addressed in this proposed rule, as described in this notice. We are soliciting comments on the proposed emission standards for back-end CPVs at existing affected sources, whether to extend the compliance date for the proposed revised emission standards for back-end CPVs at existing affected sources, whether to promulgate separate emissions standards for reactor front-end CPVs and non-reactor front-end CPVs at existing affected sources in lieu of leaving them subject to the current CPV standards, and on the information available to the EPA to establish emission standards for front-end CPVs at existing affected sources. We also request comments on the proposed work practice standards for storage vessels at new and existing APR sources during periods when an emission control system for a fixed roof tank vent is undergoing planned routine maintenance. We are not soliciting and will not respond to comments addressing any other issues or other provisions of the 2014 final rule or any other rule, including other issues raised in the petitions for reconsideration of the 2014 final rule. Those issues will be addressed, as appropriate, in a separate, future action.

## **VII. 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 the Office of Management and Budget (OMB) for review.

*B. 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 1869.08. You can find a copy of the ICR in the docket for this rule, and it is briefly summarized here.

This proposed rule would require recordkeeping and reporting of occurrences when control devices used to comply with the storage tank provisions undergo planned routine maintenance. Reporting of such occurrences would be required to be disclosed in the Periodic Reports as specified at 40 CFR 63.1417.

*Respondents/affected entities:* The respondents affected by the amendments to 40 CFR part 63, subpart OOO include, but are not limited to, facilities having a NAICS code 325211 (United States Standard Industrial Classification 2821). Facilities with a NAICS code of 325211 are described as Plastics Material and Resin Manufacturing establishments, which includes facilities engaged in manufacturing amino resins and phenolic resins, as well as other plastic and resin types.

*Respondent's obligation to respond:* Mandatory under sections 112 and 114 of the CAA.

*Estimated number of respondents:* 15.

*Frequency of response:* Once or twice per year.

*Total estimated burden:* 45 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost: \$2,600 (per year).*

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](mailto: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.

*C. 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. The EPA has identified no small entities that are subject to the requirements of 40 CFR 63, subpart OOO.

*D. 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.

*E. 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.

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

This action does not have tribal implications as specified in Executive Order 13175. This action will not have substantial direct effects on tribal governments, on the relationship between the federal government and Indian tribes, or on the distribution of power and responsibilities between the federal government and Indian tribes, as specified in Executive Order 13175. Thus, Executive Order 13175 does not apply to this action.

*G. 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. The EPA's risk assessments for the 2014 final rule (Docket ID No. EPA-HQ-OAR-2012-0133) demonstrate that the current regulations are associated with an acceptable level of risk and provide an ample margin of safety to protect public health and prevent adverse environmental effects. This proposed action would not alter those conclusions.

*H. 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.

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

This rulemaking does not involve technical standards.

*J. 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).

In the 2014 final rule, the EPA determined that the current health risks posed by emissions from these source categories are acceptable and provide an ample margin of safety to protect public health and prevent adverse environmental effects. This proposed action would not alter the conclusions made in the 2014 final rule regarding these analyses.

National Emission Standards for Hazardous Air Pollutants:

Manufacture of Amino/Phenolic Resins

Page 40 of 61

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

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

Dated:\_\_\_\_\_.

---

E. Scott Pruitt,  
Administrator.



For the reasons stated in the preamble, the Environmental Protection Agency is proposing 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 OOO—National Emission Standards for Hazardous Air Pollutant Emissions: Manufacture of Amino/Phenolic Resins**

2. Section 63.1400 is amended by revising paragraph (b)(4) to read as follows:

**§ 63.1400 Applicability and designation of affected sources.**

\* \* \* \* \*

(b) \* \* \*

(4) Equipment that does not contain organic hazardous air pollutants (HAP) and is located within an APPU that is part of an affected source;

\* \* \* \* \*

3. Section 63.1402 is amended by:

a. Adding, in alphabetical order, definitions for “Back-end continuous process vent,” “Front-end continuous process vent,” “Non-reactor process vent,” and “Reactor process vent” to paragraph (b); and

b. Removing the definitions for “Non-reactor batch process vent” and “Reactor batch process vent” from paragraph (b).

The additions read as follows:

**§ 63.1402 Definitions.**

\* \* \* \* \*

(b) \* \* \*

*Back-end continuous process vent* means a continuous process vent for operations related to processing liquid resins into a dry form. Back-end process operations include, but are not limited to, flaking, grinding, blending, mixing, drying, pelletizing, and other finishing operations, as well as latex and crumb storage. Back-end does not include storage and loading of finished product or emission points that are regulated under §§63.1404 or 63.1409 through 63.1411 of this subpart.

\* \* \* \* \*

*Front-end continuous process vent* means a continuous process vent for operations in an APPU related to producing liquid resins, including any product recovery, stripping and filtering operations, and prior to any flaking or drying operations.

\* \* \* \* \*

*Non-reactor process vent* means a batch or continuous process vent originating from a unit operation other than a reactor. Non-reactor process vents include, but are not limited to, process vents from filter presses, surge control vessels, bottoms receivers, weigh tanks, and distillation systems.

\* \* \* \* \*

*Reactor process vent* means a batch or continuous process vent originating from a reactor.

\* \* \* \* \*

4. Section 63.1404 is amended by adding paragraph (c) to read as follow:

**§63.1404 Storage vessel provisions.**

\* \* \* \* \*

(c) Whenever gases or vapors containing HAP are routed from a tank through a closed-vent system connected to a control device used to comply with the requirements of paragraphs (a) or (b) of this section, the control device must be operating except as provided for in paragraphs (c)(1) or (2) of this section.

(1) The control device may be bypassed for the purpose of performing planned routine maintenance of the control device. When the control device is bypassed, the owner or operator must comply with paragraphs (c)(1)(i) through (iii) of this section.

(i) The control device may only be bypassed when the planned routine maintenance cannot be performed during periods that tank emissions are vented to the control device.

(ii) On an annual basis, the total time that the closed-vent system or control device is bypassed to perform routine maintenance shall not exceed 240 hours per each calendar year.

(iii) The level of material in the tank shall not be increased during periods that the closed-vent system or control device is bypassed to perform planned routine maintenance.

(2) The gases or vapors containing HAP are routed from the tank through a closed-vent system connected to an alternate control device meeting the requirements of paragraph (a)(1) or the alternative standard in paragraph (b) of this section.

5. Section 63.1405 is amended by revising paragraphs (a) introductory text, (a)(2) introductory text, (b), and (c) to read as follows:

**§ 63.1405 Continuous process vent provisions.**

(a) *Emission standards for new affected sources.* For each continuous process vent located at a new affected source with a Total Resource Effectiveness (TRE) index value, as determined following the procedures specified in §63.1412(j), less than or equal to 1.2, the owner or operator shall comply with either paragraph (a)(1) or (2) of this section. As an

alternative to complying with paragraph (a) of this section, an owner or operator may comply with paragraph (c)(1) of this section.

\* \* \* \* \*

(2) Reduce emissions of total organic HAP by 85 weight-percent. Control shall be achieved by venting emissions through a closed vent system to any combination of control devices meeting the requirements of 40 CFR part 63, subpart SS (national emission standards for closed vent systems, control devices, recovery devices). When complying with the requirements of 40 CFR part 63, subpart SS, the following apply for purposes of this subpart:

\* \* \* \* \*

(b) *Emission standards for existing affected sources.* For each continuous process vent located at an existing affected source, the owner or operator shall comply with either paragraph (b)(1) or (2) of this section. As an alternative to complying with paragraph (b) of this section, an owner or operator may comply with paragraph (c)(2) of this section.

(1) Vent all emissions of organic HAP to a flare.

(2) The owner or operator of a back-end continuous process vent shall reduce total organic HAP emissions to less than or equal to 4.3 kg of total organic HAP per megagram of resin produced (8.6 pounds of total organic HAP per ton of resin produced).

(c) *Alternative emission standards.* As an alternative to complying with paragraphs (a) or (b) of this section, an owner or operator may comply with paragraph (c)(1) or (2) of this section, as appropriate.

(1) For each continuous process vent located at a new affected source, the owner or operator shall vent all organic HAP emissions from a continuous process vent meeting the TRE value specified in paragraph (a) of this section to a non-flare combustion control device

achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any continuous process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraphs (a)(1) or (2) of this section.

(2) For each continuous process vent located at an existing affected source, the owner or operator shall vent all organic HAP emissions from a continuous process vent to a non-flare combustion control device achieving an outlet organic HAP concentration of 20 ppmv or less or to a non-combustion control device achieving an outlet organic HAP concentration of 50 ppmv or less. Any continuous process vents that are not vented to a control device meeting these conditions shall be controlled in accordance with the provisions of paragraphs (b)(1) or (2) of this section.

6. Section 63.1412 is amended by revising paragraphs (a) and (k)(2) to read as follows:

**§ 63.1412 Continuous process vent applicability assessment procedures and methods.**

(a) *General.* The provisions of this section provide procedures and methods for determining the applicability of the control requirements specified in §63.1405(a) to continuous process vents.

\* \* \* \* \*

(k) \* \* \*

(2) If the TRE index value calculated using engineering assessment is less than or equal to 4.0, the owner or operator is required either to perform the measurements specified in paragraphs (e) through (h) of this section for control applicability assessment or comply with the control requirements specified in §63.1405(a).

\* \* \* \* \*

7. Section 63.1413 is amended by:
- a. Revising paragraph (a) introductory text;
  - b. Adding paragraph (a)(1)(iii);
  - c. Revising paragraphs (a)(3) introductory text, (a)(4) introductory text, and paragraphs (c)(2), (4) and (5);
  - d. Redesignating paragraph (c)(6) as (c)(7);
  - e. Adding new paragraph (c)(6);
  - f. Revising newly redesignated paragraph (c)(7) and paragraphs (f) and (h)(1);
  - g. Redesignated paragraph (h)(2) and (h)(3);
  - h. Adding new paragraph (h)(2);
  - i. Revising newly redesignated paragraph (h)(3) introductory text and paragraphs (h)(3)(i), (h)(3)(ii) introductory text, (h)(3)(ii)(B)(1) and (3), and (h)(3)(iii);
  - j. Adding paragraph (h)(4); and
  - k. Revising paragraphs (i)(1)(iii) through (v).

The revisions and additions read as follows:

**§ 63.1413 Compliance demonstration procedures.**

(a) *General.* For each emission point, the owner or operator shall meet three stages of compliance, with exceptions specified in this subpart. First, the owner or operator shall conduct a performance test or design evaluation to demonstrate either the performance of the control device or control technology being used or the uncontrolled total organic HAP emissions rate from a continuous process vent. Second, the owner or operator shall meet the requirements for demonstrating initial compliance (e.g., a demonstration that the required percent reduction or emissions limit is achieved). Third, the owner or operator shall meet the requirements for

demonstrating continuous compliance through some form of monitoring (e.g., continuous monitoring of operating parameters).

\* \* \* \* \*

(1) \* \* \*

(iii) *Uncontrolled continuous process vents.* Owners or operators are required to conduct either a performance test or a design evaluation for continuous process vents that are not controlled through either a large or small control device.

\* \* \* \* \*

(3) *Design evaluations.* As provided in paragraph (a) of this section, a design evaluation may be conducted to demonstrate the organic HAP removal efficiency for a control device or control technology, or the uncontrolled total organic HAP emissions rate from a continuous process vent. As applicable, a design evaluation shall address the organic HAP emissions rate from uncontrolled continuous process vents, the composition and organic HAP concentration of the vent stream(s) entering a control device or control technology, the operating parameters of the emission point and any control device or control technology, and other conditions or parameters that reflect the performance of the control device or control technology or the organic HAP emission rate from a continuous process vent. A design evaluation also shall address other vent stream characteristics and control device operating parameters as specified in any one of paragraphs (a)(3)(i) through (vi) of this section, for controlled vent streams, depending on the type of control device that is used. If the vent stream(s) is not the only inlet to the control device, the efficiency demonstration also shall consider all other vapors, gases, and liquids, other than fuels, received by the control device.

\* \* \* \* \*

(4) *Establishment of parameter monitoring levels.* The owner or operator of a control device that has one or more parameter monitoring level requirements specified under this subpart, or specified under subparts referenced by this subpart, shall establish a maximum or minimum level, as denoted on Table 4 of this subpart, for each measured parameter using the procedures specified in paragraph (a)(4)(i) or (ii) of this section. Except as otherwise provided in this subpart, the owner or operator shall operate control devices such that the hourly average, daily average, batch cycle daily average, or block average of monitored parameters, established as specified in this paragraph, remains above the minimum level or below the maximum level, as appropriate.

\* \* \* \* \*

(c) \* \* \*

(2) Initial compliance with §63.1405(a)(1) or (b)(1) (venting of emissions to a flare) shall be demonstrated following the procedures specified in paragraph (g) of this section.

\* \* \* \* \*

(4) Continuous compliance with §63.1405(a)(1) or (b)(1) (venting of emissions to a flare) shall be demonstrated following the continuous monitoring procedures specified in §63.1415.

(5) Initial and continuous compliance with the production-based emission limit specified in §63.1405(b)(2)(i) shall be demonstrated following the procedures in paragraph (h)(1) of this section.

(6) Initial and continuous compliance with the emission rate limits specified in §63.1405(b)(2)(ii) and (iii) shall be demonstrated following the procedures of either paragraphs (c)(6)(i) or (ii) or this section.



(i) Continuous process vents meeting the emission rate limit using a closed vent system and a control device or recovery device or by routing emissions to a fuel gas system or process shall follow the procedures in 40 CFR part 63, subpart SS. When complying with the requirements of 40 CFR part 63, subpart SS, the following apply for purposes of this subpart:

(A) The requirements specified in of §63.1405 (a)(2)(i) through (viii).

(B) When 40 CFR part 63, subpart SS refers to meeting a weight-percent emission reduction or ppmv outlet concentration requirement, meeting an emission rate limit in terms of kilograms of total organic HAP per hour shall also apply.

(ii) Continuous process vents meeting the emission rate limit by means other than those specified in paragraph (c)(6)(i) of this section shall follow the procedures specified in paragraph (h)(2) of this section.

(7) Initial and continuous compliance with the alternative standards specified in §63.1405(c) shall be demonstrated following the procedures in paragraph (f) of this section.

\* \* \* \* \*

(f) *Compliance with alternative standard.* Initial and continuous compliance with the alternative standards in §§63.1404(b), 63.1405(c), 63.1406(b), 63.1407(b)(1), and 63.1408(b)(1) are demonstrated when the daily average outlet organic HAP concentration is 20 ppmv or less when using a combustion control device or 50 ppmv or less when using a non-combustion control device. To demonstrate initial and continuous compliance, the owner or operator shall follow the test method specified in §63.1414(a)(6) and shall be in compliance with the monitoring provisions in §63.1415(e) no later than the initial compliance date and on each day thereafter.

\* \* \* \* \*

(h) \* \* \*

(1) Each owner or operator complying with the mass emission limit specified in §63.1405(b)(2)(i) shall determine initial compliance as specified in paragraph (h)(1)(i) of this section and continuous compliance as specified in paragraph (h)(1)(ii) of this section.

(i) *Initial compliance.* Initial compliance shall be determined by comparing the results of the performance test or design evaluation as specified in paragraph (a)(1) of this section to the mass emission limit specified in §63.1405(b)(2)(i).

(ii) *Continuous compliance.* Continuous compliance shall be based on the daily average emission rate calculated for each operating day. The first continuous compliance average daily emission rate shall be calculated using the first 24-hour period or otherwise-specified operating day after the compliance date. Continuous compliance shall be determined by comparing the daily average emission rate to the mass emission limit specified in §63.1405(b)(2)(i).

(2) As required by paragraph (c)(6)(ii) of this section, each owner or operator complying with the emission rate limits specified in §63.1405(b)(2)(ii) and (iii), as applicable, by means other than those specified in paragraph (c)(6)(i) of this section shall determine initial compliance as specified in paragraph (h)(2)(i) of this section and continuous compliance as specified in paragraph (h)(2)(ii) of this section.

(i) *Initial compliance.* Initial compliance shall be determined by comparing the results of the performance test or design evaluation as specified in paragraph (a)(1) of this section to the emission rate limits specified in §63.1405(b)(2)(ii) and (iii), as applicable.

(ii) *Continuous compliance.* Continuous compliance shall be based on the hourly average emission rate calculated for each operating day. The first continuous compliance average hourly emission rate shall be calculated using the first 24-hour period or otherwise-specified operating

day after the compliance date. Continuous compliance shall be determined by comparing the average hourly emission rate to the emission rate limit specified in §63.1405(b)(2)(ii) or (iii), as applicable.

(3) *Procedures to determine continuous compliance with the mass emission limit specified in §63.1405(b)(2)(i).* (i) The daily emission rate, kilograms of organic HAP per megagram of product, shall be determined for each operating day using Equation 5 of this section:

$$ER = \frac{E_i}{RP_m} \quad [\text{Eq. 5}]$$

Where:

ER = Emission rate of organic HAP from continuous process vent, kg of HAP/Mg product.

$E_i$  = Emission rate of organic HAP from continuous process vent  $i$  as determined using the procedures specified in paragraph (h)(3)(ii) of this section, kg/day.

$RP_m$  = Amount of resin produced in one month as determined using the procedures specified in paragraph (h)(3)(iii) of this section, Mg/day.

(ii) The daily emission rate of organic HAP, in kilograms per day, from an individual continuous process vent ( $E_i$ ) shall be determined. Once organic HAP emissions have been estimated, as specified in paragraph (h)(3)(ii)(A) of this section for uncontrolled continuous process vents or paragraphs (h)(3)(ii)(A) and (B) of this section for continuous process vents vented to a control device or control technology, the owner or operator may use the estimated organic HAP emissions ( $E_i$ ) until the estimated organic HAP emissions are no longer representative due to a process change or other reason known to the owner or operator. If organic HAP emissions ( $E_i$ ) are determined to no longer be representative, the owner or operator shall

redetermine organic HAP emissions for the continuous process vent following the procedures in paragraph (h)(3)(ii)(A) of this section for uncontrolled continuous process vents or paragraphs (h)(3)(ii)(A) and (B) of this section for continuous process vents vented to a control device or control technology.

\* \* \* \* \*

(B) \* \* \*

(1) Uncontrolled organic HAP emissions shall be determined following the procedures in paragraph (h)(3)(ii)(A) of this section.

\* \* \* \* \*

(3) Controlled organic HAP emissions shall be determined by applying the control device or control technology efficiency, determined in paragraph (h)(3)(ii)(B)(2) of this section, to the uncontrolled organic HAP emissions, determined in paragraph (h)(3)(ii)(B)(1) of this section.

(iii) The rate of resin produced,  $RP_M$  (Mg/day), shall be determined based on production records certified by the owner or operator to represent actual production for the day. A sample of the records selected by the owner or operator for this purpose shall be provided to the Administrator in the Precompliance Report as required by §63.1417(d).

(4) *Procedures to determine continuous compliance with the emission rate limit specified in §63.1405(b)(2)(ii) or (iii).*

(i) The hourly emission rate, kilograms of organic HAP per hour, shall be determined for each hour during the operating day using Equation 6 of this section:

$$E_H = K_2 \left( \sum_{j=1}^n C_j M_j \right) Q_S \text{ (Eq.6)}$$

Where:

$E_H$  = Hourly emission rate of organic HAP in the sample, kilograms per hour.

$K_2$  = Constant,  $2.494 \times 10^{-6}$  (parts per million)<sup>-1</sup> (gram-mole per standard cubic meter) (kilogram/gram) (minutes/hour), where standard temperature for (gram-mole per standard cubic meter) is 20 °C.

$n$  = Number of components in the sample.

$C_j$  = Organic HAP concentration on a dry basis of organic compound  $j$  in parts per million as determined by the methods specified in paragraph (h)(4)(ii) of this section.

$M_j$  = Molecular weight of organic compound  $j$ , gram/gram-mole.

$Q_S$  = Continuous process vent flow rate, dry standard cubic meter per minute, at a temperature of 20 °C, as determined by the methods specified in paragraph (h)(4)(ii) of this section.

(ii) The average hourly emission rate, kilograms of organic HAP per hour, shall be determined for each operating day using Equation 7 of this section:

$$AE = \frac{\sum_{i=1}^n E_H}{n}$$

(Eq.7)

Where:

$AE$  = Average hourly emission rate per operating day, kilograms per hour.

$n$  = Number of hours in the operating day.

(ii) Continuous process vent flow rate and organic HAP concentration shall be determined using the procedures specified in §63.1414(a), or by using the engineering assessment procedures in paragraph (h)(4)(iii) of this section.

(iii) *Engineering assessment.* For the purposes of determining continuous compliance with the emission rate limit specified in §63.1405(b)(2)(ii) or (iii) using Equations 6 and 7, engineering assessments may be used to determine continuous process vent flow rate and organic HAP concentration. An engineering assessment includes, but is not limited to, the following examples:

(A) Previous test results, provided the tests are representative of current operating practices.

(B) Bench-scale or pilot-scale test data representative of the process under representative operating conditions.

(C) Maximum volumetric flow rate or organic HAP concentration specified or implied within a permit limit applicable to the continuous process vent.

(D) Design analysis based on accepted chemical engineering principles, measurable process parameters, or physical or chemical laws or properties. Examples of analytical methods include, but are not limited to, the following:

(1) Estimation of maximum organic HAP concentrations based on process stoichiometry material balances or saturation conditions; and

(2) Estimation of maximum volumetric flow rate based on physical equipment design such as pump or blower capacities.

\* \* \* \* \*

(i) \* \* \*

(1) \* \* \*

(iii) Exceedance of the mass emission limit (i.e., having an average value higher than the specified limit) monitored according to the provisions of paragraph (e)(2) of this section for

batch process vents and according to the provisions of paragraph (h)(1) of this section for continuous process vents;

(iv) Exceedance of the organic HAP outlet concentration limit (i.e., having an average value higher than the specified limit) monitored according to the provisions of §63.1415(e); and

(v) Exceedance of the emission rate limit (i.e., having an average value higher than the specified limit) determined according to the provisions of paragraph (h)(2) of this section.

\* \* \* \* \*

7. Section 63.1415 is amended by revising paragraph (e) to read as follows:

**§ 63.1415 Monitoring requirements.**

\* \* \* \* \*

(e) *Monitoring for the alternative standards.* For control devices that are used to comply with the provisions of §§63.1404(b), 63.1405(c), 63.1406(b), 63.1407(b), or 63.1408(b), the owner or operator shall conduct continuous monitoring of the outlet organic HAP concentration whenever emissions are vented to the control device. Continuous monitoring of outlet organic HAP concentration shall be accomplished using an FTIR instrument following Method PS-15 of 40 CFR part 60, appendix B. The owner or operator shall calculate a daily average outlet organic HAP concentration.

8. Section 63.1416 is amended by:

- a. Revising paragraphs (f)(1), (3) and (5) introductory text;
- b. Redesignating paragraph (f)(5)(ii) as (f)(5)(iii);
- c. Adding new paragraph (f)(5)(ii);
- d. Revising newly redesignated paragraph (f)(5)(iii);
- e. Redesignating paragraph (f)(6) as (f)(7);

f. Adding new paragraph (f)(6); and

g. Revising newly redesignated paragraph (f)(7) introductory text and paragraph

(g)(5)(v)(E).

The revisions and additions read as follows:

**§ 63.1416 Recordkeeping requirements.**

\* \* \* \* \*

(f) \* \* \*

(1) *TRE index value records.* Each owner or operator of a continuous process vent at a new affected source shall maintain records of measurements, engineering assessments, and calculations performed according to the procedures of §63.1412(j) to determine the TRE index value. Documentation of engineering assessments, described in §63.1412(k), shall include all data, assumptions, and procedures used for the engineering assessments.

\* \* \* \* \*

(3) *Organic HAP concentration records.* Each owner or operator shall record the organic HAP concentration as measured using the sampling site and organic HAP concentration determination procedures (if applicable) specified in §63.1412(b) and (e), or determined through engineering assessment as specified in §63.1412(k).

\* \* \* \* \*

(5) If a continuous process vent is seeking to demonstrate compliance with the mass emission limit specified in §63.1405(b)(2)(i), keep records specified in paragraphs (f)(5)(i) through (iii) of this section.

\* \* \* \* \*

(ii) Identification of the period of time that represents an operating day.



(iii) The daily organic HAP emissions from the continuous process vent determined as specified in §63.1413(h)(3).

(6) If a continuous process vent is seeking to demonstrate compliance with the emission rate limits specified in §63.1405(b)(2)(ii) or (iii), keep records specified in paragraphs (f)(6)(i) through (iii) of this section.

(i) The results of the initial compliance demonstration specified in §63.1413(h)(2)(i).

(ii) Identification of the period of time that represents an operating day.

(iii) The average hourly organic HAP emissions from the continuous process vent determined as specified in §63.1413(h)(4).

(7) When using a flare to comply with §63.1405(a)(1) or (b)(1), keep the records specified in paragraphs (f)(7)(i) through (f)(7)(iii) of this section.

\* \* \* \* \*

(g) \* \* \*

(5) \* \* \*

(v) \* \* \*

(E) The measures adopted to prevent future such pressure releases.

\* \* \* \* \*

9. Section 63.1417 is amended by:

a. Revising paragraphs (d) introductory text, (d)(8), (e)(1) introductory text, (f) introductory text, and (f)(1), (2), (5) introductory text and (12)(ii);

b. Adding paragraphs (f)(14) and (15); and

c. Revising paragraph (h)(7) introductory text.

The revisions and additions read as follows:

**§ 63.1417 Reporting requirements.**

\* \* \* \* \*

(d) *Precompliance Report.* Owners or operators of affected sources requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; requesting approval to use engineering assessment to estimate organic HAP emissions from a batch emissions episode as described in §63.1414(d)(6)(i)(C); wishing to establish parameter monitoring levels according to the procedures contained in §63.1413(a)(4)(ii); establishing parameter monitoring levels based on a design evaluation as specified in §63.1413(a)(3); or following the procedures in §63.1413(e)(2); or following the procedures in §63.1413(h)(3), shall submit a Precompliance Report according to the schedule described in paragraph (d)(1) of this section. The Precompliance Report shall contain the information specified in paragraphs (d)(2) through (11) of this section, as appropriate.

\* \* \* \* \*

(8) If an owner or operator is complying with the mass emission limit specified in §63.1405(b)(2)(i), the sample of production records specified in §63.1413(h)(3) shall be submitted in the Precompliance Report.

\* \* \* \* \*

(e) \* \* \*

(1) The results of any emission point applicability determinations, performance tests, design evaluations, inspections, continuous monitoring system performance evaluations, any other information used to demonstrate compliance, and any other information, as appropriate, required to be included in the Notification of Compliance Status under 40 CFR part 63, subpart

WW and subpart SS, as referred to in §63.1404 for storage vessels; under 40 CFR part 63, subpart SS, as referred to in §63.1405 for continuous process vents; under §63.1416(f)(1) through (3), (5)(i) and (ii), and (6)(i) and (ii) for continuous process vents; under §63.1416(d)(1) for batch process vents; and under §63.1416(e)(1) for aggregate batch vent streams. In addition, each owner or operator shall comply with paragraphs (e)(1)(i) and (ii) of this section.

\* \* \* \* \*

(f) *Periodic Reports.* Except as specified in paragraph (f)(12) of this section, a report containing the information in paragraph (f)(2) of this section or containing the information in paragraphs (f)(3) through (11) and (13) through (15) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 180 day period. In addition, for equipment leaks subject to §63.1410, the owner or operator shall submit the information specified in 40 CFR part 63, subpart UU, and for heat exchange systems subject to §63.1409, the owner or operator shall submit the information specified in §63.1409. Section 63.1415 shall govern the use of monitoring data to determine compliance for emissions points required to apply controls by the provisions of this subpart.

(1) Except as specified in paragraph (f)(12) of this section, a report containing the information in paragraph (f)(2) of this section or containing the information in paragraphs (f)(3) through (11) and (13) through (15) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 180 day period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due. Subsequent reports shall cover each preceding 6-month period.

(2) If none of the compliance exceptions specified in paragraphs (f)(3) through (11) and (13) through (15) of this section occurred during the 6-month period, the Periodic Report required by paragraph (f)(1) of this section shall be a statement that the affected source was in compliance for the preceding 6-month period and no activities specified in paragraphs (f)(3) through (11) and (13) through (15) of this section occurred during the preceding 6-month period.

\* \* \* \* \*

(5) If there is a deviation from the mass emission limit specified in §63.1406(a)(1)(iii) or (a)(2)(iii), §63.1407(b)(2), or §63.1408(b)(2), the following information, as appropriate, shall be included:

\* \* \* \* \*

(12) \* \* \*

(ii) The quarterly reports shall include all information specified in paragraphs (f)(3) through (11) and (13) through (15) of this section applicable to the emission point for which quarterly reporting is required under paragraph (f)(12)(i) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (f)(1) of this section.

\* \* \* \* \*

(14) If there is a deviation from the mass emission limit specified in §63.1405(b)(2)(i), the report shall include the daily average emission rate calculated for each operating day for which a deviation occurred.

(15) If there is a deviation from the emission rate limit specified in §63.1405(b)(2)(ii) or (iii), the report shall include the following information for each operating day for which a deviation occurred:

(i) The calculated average hourly emission rate.

(ii) The individual hourly emission rate data points making up the average hourly emission rate.

\* \* \* \* \*

(h) \* \* \*

(7) Whenever a continuous process vent becomes subject to control requirements under §63.1405, as a result of a process change, the owner or operator shall submit a report within 60 days after the performance test or applicability assessment, whichever is sooner. The report may be submitted as part of the next Periodic Report required by paragraph (f) of this section.

\* \* \* \* \*