



## **ENVIRONMENTAL PROTECTION AGENCY**

### **40 CFR Part 63**

**[EPA-HQ-OAR-2002-0037; FRL-10015-41-OAR]**

**RIN 2060-AR73**

### **National Emission Standards for Hazardous Air Pollutants: Polyvinyl Chloride and Copolymers Production Reconsideration**

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

**ACTION:** Proposed rule; reconsideration of final rule.

**SUMMARY:** On April 17, 2012, the U.S. Environmental Protection Agency (EPA) promulgated National Emission Standards for Hazardous Air Pollutants (NESHAP) for Polyvinyl Chloride and Copolymers (PVC) Production at major and area sources. Subsequently, the Administrator received and granted petitions for reconsideration of the emission limits in the 2012 final rules for process vents, process wastewater, and stripped resin for major and area sources. In response to the petitions and after gathering additional information from PVC companies, the EPA is proposing revisions to emission limits in the 2012 major source rule for process vents and process wastewater. Although the EPA is not proposing revisions to emission limits in the 2012 area source rule, the EPA is proposing other amendments that affect both rules, including technical corrections and clarifications related to the standards for stripped resin, storage vessels (including the use of vapor balancing), equipment leaks, and closed vent systems. The EPA is also proposing to clarify text and correct typographical errors, grammatical errors, and cross-reference errors in both rules. In addition, the EPA is proposing to remove the affirmative defense provisions. We estimate that, if finalized, these proposed amendments would

result in hazardous air pollutants (HAP) emissions reductions of 34 tons per year (tpy) with an annualized cost of \$0.39 million.

**DATES:** Comments must be received on or before **[INSERT DATE 60 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Under the Paperwork Reduction Act (PRA), comments on the information collection provisions are best assured of consideration if the Office of Management and Budget (OMB) receives a copy of your comments on or before **[INSERT DATE 30 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**.

*Public hearing.* If anyone contacts us requesting a public hearing on or before **[INSERT DATE 5 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**, we will hold a virtual public hearing. See **SUPPLEMENTARY INFORMATION** for information on requesting and registering for a public hearing.

**ADDRESSES:** You may send comments, identified by Docket ID No. EPA-HQ-OAR-2002-0037, by any of the following methods:

- Federal eRulemaking Portal: <https://www.regulations.gov/> (our preferred method).  
Follow the online instructions for submitting comments.
- Email: [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov). Include Docket ID No. EPA-HQ-OAR-2002-0037 in the subject line of the message.
- Fax: (202) 566-9744. Attention Docket ID No. EPA-HQ-OAR-2002-0037.
- Mail: U.S. Environmental Protection Agency, EPA Docket Center, Docket ID No. EPA-HQ-OAR-2002-0037, Mail Code 28221T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460.

- Hand Delivery or Courier (by scheduled appointment only): EPA Docket Center, WJC West Building, Room 3334, 1301 Constitution Avenue, NW, Washington, DC 20004. The Docket Center's hours of operation are 8:30 a.m. – 4:30 p.m., Monday – Friday (except Federal holidays).

*Instructions:* All submissions received must include the Docket ID No. for this rulemaking. Comments received may be posted without change to <https://www.regulations.gov/>, including any personal information provided. For detailed instructions on sending comments and additional information on the rulemaking process, see the **SUPPLEMENTARY INFORMATION** section of this document. Out of an abundance of caution for members of the public and our staff, the EPA Docket Center and Reading Room are closed to the public, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the public to submit comments via <https://www.regulations.gov/> or email, as there may be a delay in processing mail and faxes. For further information on EPA Docket Center services and the current status, please visit us online at <https://www.epa.gov/dockets>.

**FOR FURTHER INFORMATION CONTACT:** For questions about this proposed action, contact Ms. Jennifer Caparoso, 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) 541-4063; fax number: (919) 541-0516; and email address: [caparoso.jennifer@epa.gov](mailto:caparoso.jennifer@epa.gov).

**SUPPLEMENTARY INFORMATION:**

*Participation in virtual public hearing.* Please note that the EPA is deviating from its typical approach because the President has declared a national emergency. Due to the current

Centers for Disease Control and Prevention (CDC) recommendations, as well as state and local orders for social distancing to limit the spread of COVID-19, the EPA cannot hold in-person public meetings at this time.

If requested, the virtual hearing will be held on **[INSERT DATE 15 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The hearing will convene at 9:00 a.m. Eastern Time (ET) and will conclude at 3:00 p.m. ET. The EPA may close a session 15 minutes after the last pre-registered speaker has testified if there are not additional speakers. The EPA will announce further details on the virtual public hearing website at <https://www.epa.gov/stationary-sources-air-pollution/polyvinyl-chloride-and-copolymers-production-national-emission-0>.

The EPA will begin pre-registering speakers for the hearing upon publication of this document in the **Federal Register**. To register to speak at the virtual hearing, please use the online registration form available at: <https://www.epa.gov/stationary-sources-air-pollution/polyvinyl-chloride-and-copolymers-production-national-emission-0> or contact Ms. Virginia Hunt at (919) 541-0832 or by email at [hunt.virginia@epa.gov](mailto:hunt.virginia@epa.gov). The last day to pre-register to speak at the hearing will be **[INSERT DATE 12 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. Prior to the hearing, the EPA will post a general agenda that will list pre-registered speakers in approximate order at <https://www.epa.gov/stationary-sources-air-pollution/polyvinyl-chloride-and-copolymers-production-national-emission-0>.

The EPA will make every effort to follow the schedule as closely as possible on the day of the hearing; however, please plan for the hearing to run either ahead of schedule or behind schedule.

Each commenter will have 5 minutes to provide oral testimony. The EPA encourages commenters to provide the EPA with a copy of their oral testimony electronically by emailing it to [caparoso.jennifer@epa.gov](mailto:caparoso.jennifer@epa.gov). The EPA also recommends submitting the text of your oral testimony as written comments to the rulemaking docket.

The EPA may ask clarifying questions during the oral presentations but will not respond to the presentations at that time. Written statements and supporting information submitted during the comment period will be considered with the same weight as oral testimony and supporting information presented at the public hearing.

Please note that any updates made to any aspect of the hearing will be posted online at <https://www.epa.gov/stationary-sources-air-pollution/polyvinyl-chloride-and-copolymers-production-national-emission-0>. While the EPA expects the hearing to go forward as set forth above, if requested, please monitor our website or contact Ms. Virginia Hunt at 919-541-0832 or [hunt.virginia@epa.gov](mailto:hunt.virginia@epa.gov) to determine if there are any updates. The EPA does not intend to publish a document in the **Federal Register** announcing updates.

If you require the services of a translator or a special accommodation such as audio description, please pre-register for the hearing with Virginia Hunt and describe your needs by **[INSERT DATE 7 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER]**. The EPA may not be able to arrange accommodations without advance notice.

*Docket.* The EPA has established a docket for this rulemaking under Docket ID No. EPA-HQ-OAR-2002-0037. All documents in the docket are listed in Regulations.gov. Although listed, some information is not publicly available, *e.g.*, Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Certain other material, such as

copyrighted material, is not placed on the Internet and will be publicly available only in hard copy. Publicly available docket materials are available electronically in Regulations.gov.

*Instructions.* Direct your comments to Docket ID No. EPA-HQ-OAR-2002-0037. The EPA's policy is that all comments received will be included in the public docket without change and may be made available online at <https://www.regulations.gov/>, including any personal information provided, unless the comment includes information claimed to be CBI or other information whose disclosure is restricted by statute. Do not submit electronically any information that you consider to be CBI or other information whose disclosure is restricted by statute. This type of information should be submitted by mail as discussed below.

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

The <https://www.regulations.gov/> website allows you to submit your comment anonymously, which means the EPA will not know your identity or contact information unless you provide it in the body of your comment. If you send an email comment directly to the EPA without going through <https://www.regulations.gov/>, your email address will be automatically captured and included as part of the comment that is placed in the public docket and made available on the Internet. If you submit an electronic comment, the EPA recommends that you

include your name and other contact information in the body of your comment and with any digital storage media you submit. If the EPA cannot read your comment due to technical difficulties and cannot contact you for clarification, the EPA may not be able to consider your comment. Electronic files should not include special characters or any form of encryption and be free of any defects or viruses. For additional information about the EPA's public docket, visit the EPA Docket Center homepage at <https://www.epa.gov/dockets>.

The EPA is temporarily suspending its Docket Center and Reading Room for public visitors, with limited exceptions, to reduce the risk of transmitting COVID-19. Our Docket Center staff will continue to provide remote customer service via email, phone, and webform. We encourage the public to submit comments via <https://www.regulations.gov/> as there may be a delay in processing mail and faxes. Hand deliveries or couriers will be received by scheduled appointment only. For further information and updates on EPA Docket Center services, please visit us online at <https://www.epa.gov/dockets>.

The EPA continues to carefully and continuously monitor information from the CDC, local area health departments, and our federal partners so that we can respond rapidly as conditions change regarding COVID-19.

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

through the procedures outlined in *Instructions* above. If you submit any digital storage media that does not contain CBI, mark the outside of the digital storage media clearly that it does not contain CBI. Information not marked as CBI will be included in the public docket and the EPA's electronic public docket without prior notice. Information marked as CBI will not be disclosed except in accordance with procedures set forth in 40 Code of Federal Regulations (CFR) part 2. Send or deliver information identified as CBI only to the following address: OAQPS Document Control Officer (C404-02), OAQPS, U.S. Environmental Protection Agency, Research Triangle Park, North Carolina 27711, Attention Docket ID No. EPA-HQ-OAR-2002-0037. Note that written comments containing CBI and submitted by mail may be delayed and no hand deliveries will be accepted.

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

CAA	Clean Air Act
CBI	Confidential Business Information
CDC	Centers for Disease Control and Prevention
CEMS	continuous emission monitoring systems
CFR	Code of Federal Regulations
EPA	Environmental Protection Agency
ET	Eastern Time
GACT	generally achievable control technology
HAP	hazardous air pollutant(s)
HON	Hazardous Organic NESHAP
ICR	Information Collection Request
LDAR	leak detection and repair
MACT	maximum achievable control technology
NAICS	North American Industry Classification System
NESHAP	national emission standards for hazardous air pollutants
NRDC	Natural Resources Defense Council
NTTAA	National Technology Transfer and Advancement Act
OMB	Office of Management and Budget

ppm	parts per million
ppmvd	parts per million by volume dry
ppmw	parts per million by weight
PRA	Paperwork Reduction Act
PRD	pressure relief device
PVC	polyvinyl chloride and copolymers
PVCPU	PVC production process unit
RDL	representative detection level
RFA	Regulatory Flexibility Act
SSM	startup, shutdown, and malfunction
TEQ	toxic equivalency
THC	total hydrocarbons
TOHAP	total non-vinyl chloride organic HAP
tpy	tons per year
UMRA	Unfunded Mandates Reform Act
UPL	upper prediction 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

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- A. Process Vents
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- C. Stripped Resin
- D. Storage Vessels
- E. Affected Source
- F. Equipment Leaks
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- H. Affirmative Defense

I. Other Technical Corrections and Clarifications

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V. Statutory and Executive Order Reviews

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- B. Executive Order 13771: Reducing Regulations and Controlling Regulatory Costs
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- G. Executive Order 13175: Consultation and Coordination with Indian Tribal Governments
- H. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks
- I. Executive Order 13211: Actions Concerning Regulations That Significantly Affect Energy Supply, Distribution, or Use
- J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51
- K. 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?*

*Regulated Entities.* Categories and entities potentially regulated by this action are shown in Table 1 of this preamble.

TABLE 1. INDUSTRIAL SOURCE CATEGORIES AFFECTED BY THIS PROPOSED ACTION

NESHAP and Source Category	NAICS <sup>1</sup> Code
Polyvinyl Chloride and Copolymers Production	325211

<sup>1</sup> North American Industry Classification System.

Table 1 of this preamble is not intended to be exhaustive, but rather to provide a guide for readers regarding entities likely to be affected by this action for the source categories listed. To determine whether your facility is affected, you should examine the applicability criteria in the appropriate NESHAP. If you have any questions regarding the applicability of any aspect of these NESHAP, please contact the 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. 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/polyvinyl-chloride-and-copolymers-production-national-emission-0>. Following publication in the **Federal Register**, the EPA will post the **Federal Register** version of the proposal at this same website.

A redline version of the regulatory language that incorporates the proposed changes in this action and supporting technical documents are available in the docket for this rulemaking.

## **II. Background**

On July 10, 2002, the EPA promulgated the NESHAP for new and existing PVC production facilities located at major sources in 40 CFR part 63, subpart J (67 FR 45886). In that rulemaking, the EPA regulated vinyl chloride as a surrogate for all HAP emitted from PVC production and determined that the existing Vinyl Chloride NESHAP (40 CFR part 61, subpart F) reflected the application of maximum achievable control technology (MACT), thereby satisfying CAA section 112(d), except for equipment leaks at new sources. For equipment leaks, the EPA required that new sources comply with 40 CFR part 63, subpart UU.

In October 2003, Mossville Environmental Action Now and Sierra Club argued in the United States Court of Appeals for the District of Columbia Circuit (the court) that the EPA had failed to set emission standards for all HAP emitted by PVC plants. See *Mossville Environmental Action Now v. EPA*, 370 F.3d at 1232 (D.C. Cir. 2004). The EPA argued that it set emission standards for vinyl chloride as a surrogate for all HAP emitted from the source category because it was the predominant HAP used and emitted at PVC plants; however, the court ruled that the EPA did not adequately explain the basis for its decision to use vinyl chloride as a surrogate for

the HAP other than vinyl chloride. The court “vacated and remanded [the rule in its entirety] to the Agency for it to reconsider or properly explain its methodology for regulating [HAP] emitted in PVC production other than vinyl chloride by use of a surrogate.” *Id.* at 370 F.3d at 1243.

On January 23, 2007 (72 FR 2930), the EPA promulgated the NESHAP for new and existing PVC production area sources in 40 CFR part 63, subpart DDDDDD, based on generally achievable control technology (GACT) under CAA section 112(d)(5), and required area sources to meet the requirements in the existing Vinyl Chloride NESHAP (40 CFR part 61, subpart F).

On April 17, 2012 (77 FR 22848), in response to the 2004 court remand in *Mossville Environmental Action Now*, the EPA finalized the NESHAP for PVC production at major sources under CAA sections 112(d)(2) and (3). In the same rulemaking, the EPA revised the area source standards under CAA section 112(d)(6). The April 17, 2012, final major and area source rules (herein referred to as the “2012 final major and area source rules”) established emission limits and work practice standards for total organic HAP, and also for three specific HAP: vinyl chloride, chlorinated dibenzodioxins and furans (dioxins and furans), and hydrogen chloride (HCl).<sup>1</sup> To determine the emissions limits and work practice standards, the EPA gathered information on PVC production through public comment, review of previously collected information, current literature, data from the National Emissions Inventory, meetings and voluntary information submissions by industry and the industry trade association. Also, in the form of an electronic survey and emission testing of HAP, the EPA collected information from PVC production facilities, as well as co-located ethylene dichloride and vinyl chloride facilities.

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<sup>1</sup> The EPA did not set emission limits or work practice standards for HCl from PVC area sources. Under CAA sections 112(c)(6) and 112(k), HCl was not determined to be one of the top 30 urban air toxics that pose the greatest potential health threat in urban areas; thus, regulation as an area source is not warranted. For additional details, see <https://www3.epa.gov/airtoxics/area/arearules.html>.

All Agency correspondence related to the data gathering activities is provided in the docket for this rulemaking.

In June 2012, the EPA received four petitions for reconsideration on the 2012 final major and area source rules pursuant to CAA section 307(d)(7)(B) from the following petitioners: one petition from environmental groups (*i.e.*, Mossville Environmental Action Now, Louisiana Environmental Action Network, Air Alliance Houston, and Sierra Club); and three petitions from the regulated industry and their representatives (*i.e.*, PolyOne Corporation, Saint-Gobain Corporation and CertainTeed Corporation, and Vinyl Institute, Inc.). Copies of the petitions are provided in the docket for this rulemaking (see Docket Item Nos. EPA-HQ-OAR-2002-0037-0544, EPA-HQ-OAR-2002-0037-0568, EPA-HQ-OAR-2002-0037-0217, and EPA-HQ-OAR-2002-0037-0569). At the same time, the above petitioners, along with OxyVinyls, LP, petitioned the court for judicial review of the 2012 final major and area source rules. The petitioners primarily requested the EPA reconsider the emission limits for process vents, process wastewater, and stripped resin because they argued that it was not feasible to comment on the new data on which the EPA based the final emission limits. Petitioners also argued that they were not afforded the opportunity to comment on the subcategorization of process vents and stripped resin. Petitioners requested that the EPA reconsider and/or make changes to several other portions of the 2012 final major and area source rules; including requests that the EPA: (1) set the emission limits using data that represents the entire industry; (2) allow vapor balancing as a method to control emissions from storage vessels; (3) allow leak detection and repair (LDAR) of pressure vessels; (4) revise emission profile requirements; (5) remove the requirement to install electronic indicators on each pressure relief device (PRD) that would be able to identify and record the time and duration of each pressure release; and (6) remove certain aspects of the

bypass monitoring requirements, and leak monitoring and inspection requirements. In addition, one petitioner said the EPA's assumption that emission levels vary to the full extent of the 99th percent upper prediction limit (UPL) is wrong and unsupported by the record; and the EPA's decision to set MACT floors at 3 times the representative detection level (RDL) when 3 times the RDL is greater than the UPL is unlawful.

On September 28, 2012, the EPA sent letters to petitioners (see Docket Item Nos. EPA-HQ-OAR-2002-0037-0563 through EPA-HQ-OAR-2002-0037-0566) informing them that: (1) the EPA was granting reconsideration on at least petitioners' claims of inadequate opportunity to comment on the emission limits for process vents, process wastewater, and stripped resin for major and area sources; (2) the EPA intended to issue a **Federal Register** document initiating notice and comment rulemaking on the issues for which the Agency granted reconsideration; and (3) the EPA was continuing to review the other issues in the petitions for reconsideration and intended to take final action on all issues no later than the date on which the EPA takes final action on the reconsidered issues.

In 2014, Mexichem Specialty Resins, Inc., Vinyl Institute, Inc., Saint-Gobain Corporation and CertainTeed Corporation, and OxyVinyls, LP (Industry petitioners) petitioned the court to remove their case from abeyance.<sup>2</sup> The court removed the industry petitioners' cases from abeyance and, on May 29, 2015, the court rejected the Industry petitioners' arguments and denied their petitions for review. *Mexichem Specialty Resins, Inc. v. EPA*, 787 F.3d 544 (D.C. Cir. 2015). Based on this court decision, we consider all of the Industry petitioners' reconsideration requests related to the interaction between non-PVC and PVC-combined process

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<sup>2</sup> The petition for judicial review filed on behalf of Air Alliance Houston, Louisiana Environmental Action Network, Mossville Environmental Action Now, and Sierra Club, was severed from the industry case and is in abeyance pending the EPA's action on reconsideration.

vent limits and their subcategorization, vent gas absorbers, PRDs, and bypasses to be resolved, as those issues were addressed by the court.

Furthermore, on August 20, 2013, the court issued its decision in *National Association of Clean Water Agencies v. EPA*, which involved challenges to the EPA's MACT standards for Sewage Sludge Incineration, issued under CAA section 129. See 734 F.3d 1115. In this decision, the court remanded certain aspects of the rule for further explanation, including the question of how the UPL represents the MACT floor for new and existing units, as required by the CAA. The Sewage Sludge Incineration rule was issued on the same day as the Boilers and Commercial and Industrial Solid Waste Incineration rules, and used the same general methodology for calculating the MACT floors. For this reason, the EPA requested an opportunity to supplement the record in pending challenges to the Boilers and Commercial and Industrial Solid Waste Incineration rules, to provide the explanation of the Agency's analysis of variability in setting the MACT floor standards that the court believed was needed in the record for the Sewage Sludge Incineration rule. The court granted the EPA's motion for a remand of the record on May 15, 2014. Details of how the UPL is used to calculate the average emissions limitation achieved over time by the best performing source or sources is documented in the memorandum, *Use of the Upper Prediction Limit for Calculating MACT Floors*, which is available in the docket for this rulemaking. We also note that on July 29, 2016, the court determined our UPL approach is reasonable in *U.S. Sugar Corp v. EPA*, 830 F.3d 579, 639. Based on these details, we consider all of the petitioners' requests related to the EPA's methodology used to set MACT floors to be resolved.

We considered all other reconsideration petition requests and consolidated and grouped the issues for which we are granting reconsideration into distinct topics which are discussed in section III of this preamble.

### **III. Reconsideration Issues, Request for Public Comments, and Other Proposed Changes**

To address selected issues raised in the four petitions for reconsideration and not resolved by the May 29, 2015, court decision (787 F.3d 544) as described above, the EPA is proposing revisions to the emission limits in the 2012 major source rule for process vents and process wastewater. In addition, the EPA is proposing other amendments to the 2012 final major and area source rules, including technical corrections and clarifications related to the standards for stripped resin, storage vessels (including the use of vapor balancing), equipment leaks, and closed vent systems. The EPA is also proposing to clarify text and correct typographical errors, grammatical errors, and cross-reference errors in both rules. In addition, the EPA is proposing to remove the affirmative defense provisions. To ensure public participation in its final decisions, the EPA is requesting public comment on only these specific issues as described below. The EPA will not respond to any comments addressing any other provisions of the 2012 final major and area source rules or any other rules or issues.

#### *A. Process Vents*

Following the 2011 proposal (76 FR 29528), the EPA received comments and additional emissions data about process vents, and we used this information to revise the process vent MACT floors and impacts for the 2012 final major source rule. Details regarding the post-proposal data submittals are discussed in the memorandum, *Updated Information Collection and Additional Data Received for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking (see Docket Item No. EPA-HQ-

OAR-2002-0037-0197). In the 2012 final major and area source rules, we established process vent emission limits for vinyl chloride, dioxins and furans, and total hydrocarbons (THC) or total organic HAP. For the 2012 final major source rule, we also established process vent emission limits for HCl as a surrogate for all acid gas HAP and chlorine gas. For the 2012 final area source rule, the process vent emission limits are based on the baseline level of control (*i.e.*, the control level that area sources were meeting for existing and new sources) and the testing and monitoring requirements are the same as the 2012 final major source rule. To ensure that batch process vent streams are tested at worst-case conditions, in the 2012 final major and area source rules, we required that each batch process vent stream be characterized under worst-case conditions by developing an emission profile. Also, in the 2012 final major and area source rules, we clarified the definitions for process vent, continuous process vent, and batch process vent and added a definition for miscellaneous vent. Refer to the preamble of the 2012 final major and area source rules (see section III of the 2012 final preamble, 77 FR 22850) for additional details about the process vent standards.

Petitioners primarily argue that it was not feasible to comment on the new data on which the EPA based the final process vent emission limits and subcategories; and as previously mentioned in section II of this preamble, on September 28, 2012, the EPA granted reconsideration on the process vent emission limits. We request public comments on the process vent emission limits and subcategories. However, as discussed later in this section of the preamble, we are also proposing to make changes to the process vent emission limits and subcategories; therefore, we also request public comments on these changes. In addition, a petitioner said the EPA did not provide opportunity to comment on the new, broader requirements for emission profiles that we added to the 2012 final major and area source rules.

The petitioner also said the EPA did not provide opportunity to comment on the changes we made in the 2012 final major and area source rules to the definitions of process vent, continuous process vent, and batch process vent or the new definition for miscellaneous vent. The EPA is granting reconsideration on these other issues. Although we are not making any changes to the requirements in the 2012 final major and area source rules for emission profiles or to the definitions of process vent, continuous process vent, batch process vent, and miscellaneous vent, we request public comments on these requirements and definitions for the reasons set forth in the 2012 final rules (see sections III.D.1 and V.I of the 2012 final preamble, 77 FR 22855 and 22890).

In response to the petitioner's claims, the EPA issued a CAA section 114 Information Collection Request (ICR) on May 15, 2014, to PVC production companies to gather data to inform the reconsideration and potential revision of the process vent emission limits in the 2012 final major and area source rules (see Docket Item Nos. EPA-OAR-2002-0037-0600, EPA-OAR-2002-0037-0601, EPA-OAR-2002-0037-0602, EPA-OAR-2002-0037-0603, EPA-OAR-2002-0037-0604, EPA-OAR-2002-0037-0605, EPA-OAR-2002-0037-0622, and EPA-OAR-2002-0037-0623). The data collected are discussed in the memorandum, *Technical Analysis and Documentation to Support EPA's Reconsideration of 40 CFR Part 63 Subpart HHHHHHHH National Emission Standards for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking. After reviewing all of the additional process vent data that we collected since the promulgation of the 2012 final major and area source rules, we are proposing changes to those rules.

First, we are proposing changes to the 2012 final major and area source rules related to the two subcategories for process vents (*i.e.*, the "PVC-only process vent" and "PVC-combined

process vent” subcategories). Although we are not proposing to change our justification for establishing these two subcategories for process vents (see section III.B of the 2012 final preamble, 77 FR 22850), we are proposing to rename the “PVC-only process vent” subcategory the “PVC process vent” subcategory and revise the definition at 40 CFR 63.12005 such that a “PVC process vent” means a process vent that originates from a PVC production process unit (PVCPU) and is not combined with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride prior to being controlled or emitted to the atmosphere. We are also proposing to revise the definition of “PVC-combined process vent” at 40 CFR 63.12005 such that a “PVC-combined process vent” means a process vent that originates from a PVCPU and is combined with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride prior to being controlled or emitted to the atmosphere. In other words, instead of a vent which is combined with one or more process vents originating from any other source category (as is the case in the 2012 final major and area source rules), we are narrowing the definition of a “PVC-combined process vent” to refer to a vent that is combined with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride.<sup>3,4</sup> These proposed definition changes more accurately reflect the additional process vent data that we collected since the promulgation of the 2012 final major and area source rules, given that owners and operators of some vinyl chloride monomer or ethylene dichloride production units combine their vinyl chloride monomer, ethylene dichloride, and PVC process vents into one stream prior to control and these combined streams have higher

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<sup>3</sup> We are also including a sentence in each of these definitions to clarify that vent streams from process components associated with the stripped resin downstream of the resin stripper (*e.g.*, dryers, centrifuges, filters) are not considered a PVC process vent or a PVC-combined process vent because these vent streams are subject to the stripped resin standards (see section III.C of this preamble).

<sup>4</sup> We note that although these proposed changes are being made directly in the 2012 final major source rule, these proposed changes also result in revisions to the 2012 final area source rule because 40 CFR 63.11144(b) references 40 CFR 63.12005.

chlorinated loads and flow rates than a PVC process vent (as defined in this proposal). These proposed definition changes will impact the subcategory designations of two PVC facilities if finalized as proposed. Both facilities currently are in the “PVC-combined process vent” subcategory and with the proposed definition changes, the facilities would be in the “PVC process vent” subcategory. The impacts to the emission limits for each of the proposed subcategories due to the proposed definition changes are discussed below.

Second, in light of the court’s decision in *Mexichem Specialty Resins, Inc. v. EPA*, 787 F.3d 544 (D.C. Cir. 2015), we are clarifying at 40 CFR 63.11925(a) that if an applicable process vent stream at a PVCPU is comingled with a vent stream from one or more non-PVCPU sources (*e.g.*, a vent stream from a vinyl chloride monomer, ethylene dichloride production, or other chemical manufacturing process unit subject to the Hazardous Organic NESHAP (HON), 40 CFR part 63, subparts G, F, and H), and the comingled streams are vented through a shared control device, then each emission standard (and subsequent control device monitoring, recordkeeping, reporting, and other requirements) from both the PVC NESHAP and any other NESHAP to which the comingled vent stream is subject applies. In *Mexichem Specialty Resins, Inc. v. EPA*, the court ruled that if “a PVC manufacturer chooses to discharge combined emissions from PVC and non-PVC processes through a single vent, that manufacturer must comply with limits applicable to both and, where they differ, comply with the more stringent of the two.” For this reason, and to clarify what the rules are intended to regulate, we are also proposing to revise 40 CFR 63.11140(c) by removing the last sentence and 40 CFR 63.11865 by removing the phrase “or to chemical manufacturing process units, as defined in § 63.101, that produce vinyl chloride monomer or other raw materials used in the production of polyvinyl chloride and copolymers” and we are proposing at 40 CFR 63.12005 to remove the last sentence

in the definition of PVCPU. We note that although the proposed changes at 40 CFR 63.11925(a) and 40 CFR 63.12005 are being made directly in the 2012 final major source rule, these proposed changes also result in revision to the 2012 final area source rule because 40 CFR 63.11142(f)(8) references 40 CFR 63.11925 and 40 CFR 63.11144 references 40 CFR 63.12005.

Third, given that we are proposing to revise the definitions of “PVC process vent” and “PVC-combined process vent” as discussed above (and which are referenced in the area source rule), we are also proposing to amend the emission limits for PVC-combined process vents in the 2012 final area source rule by eliminating the PVC-combined process vent limits in the area source rule and instead require “PVC-combined process vents” at area sources to meet the major source process vent emission limits for “PVC-combined process vents.” Based on the additional process vent data that we collected since the promulgation of the 2012 final major and area source rules, we determined that any facility producing vinyl chloride monomer and/or ethylene dichloride is a major source (as defined in CAA section 112(a)) subject to the HON. Therefore, taking into consideration our proposed definition of “PVC-combined process vent,” we do not believe that there is any scenario where a PVC production area source can combine its process vents with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride and that combined process vent be routed to a control device being used to comply with only an area source NESHAP. We estimate that there would be no impact on any facility for making this change (*i.e.*, to eliminate the emission limits for PVC-combined process vents in the 2012 final area source rule and instead require “PVC-combined process vents” at an area source meet the major source process vent emission limits). We are proposing at 40 CFR 63.11141(f) that all affected area sources that commenced construction or reconstruction on or before May 20, 2011, must be in compliance with this change within 3 years after the date of

publication of the final rule in the **Federal Register**. We also are proposing at 40 CFR 63.11141(f) that all affected area sources that commenced construction or reconstruction after May 20, 2011, must be in compliance with this change upon the date of publication of the final rule in the **Federal Register** or initial startup, whichever is later. We are not aware of any sources that have commenced construction or reconstruction after May 20, 2011, which would be impacted by the application of the changes.

Fourth, we are proposing to revise the process vent emission limits in the 2012 final major source rule. As part of the May 15, 2014, CAA section 114 ICR, we asked for sampling and analysis of HAP including vinyl chloride, HCl, dioxins/furans, and THC from process vents operating at maximum mass loading of all HAP compounds under normal operation at eight PVC production facilities. Those data were incorporated with the previously submitted data used to support the 2012 final major source rule process vent emission limits. We then recalculated the process vent emission limits for vinyl chloride, total organic HAP, HCl, dioxins/furans, and THC accounting for the additional data received in response to the May 15, 2014, CAA section 114 ICR and also accounting for the change in subcategory for two PVC facilities based on our proposed revisions to the process vent subcategory definitions. To account for variability, we calculated the proposed MACT floors for vinyl chloride, total organic HAP, HCl, and dioxins/furans for existing and new sources using a 99-percent UPL calculation. Given the large amount of data obtained, we calculated the proposed MACT floors for THC for existing and new sources using a 99-percent upper limit calculation. Tables 2 and 3 of this preamble compare the 2012 final major source rule PVC process vent emission limits and PVC-combined process vent emission limits, respectively, to the process vent emission limits that we are proposing in this action. Also, as part of a beyond-the-floor analysis, we analyzed the cost and emissions

reductions for an existing facility to install a refrigerated condenser prior to the existing thermal oxidizer and acid gas scrubber to meet the proposed new source standards for process vents; and we determined that the overall annual cost would be \$7.2 million, and the annual emissions reductions would be 105 tons of HAP per year (approximately \$68,000/ton cost effectiveness). Furthermore, the only beyond-the-floor option we identified for new sources is a refrigerated condenser prior to the thermal oxidizer and acid gas scrubber. However, similar to the analysis for existing sources, installing a refrigerated condenser prior to the thermal oxidizer and acid gas scrubber at a new source to achieve beyond-the-MACT-floor level of control would also not be cost effective (*i.e.*, higher cost with potentially less HAP removal than existing sources). We did not identify any other measures or control technologies to further reduce emissions from process vents in the PVC production industry. Based on this analysis, we are proposing that it is not cost effective to go beyond-the-floor for process vents at existing or new sources. Our emission limit calculations, beyond-the-floor analysis, and the methodology we used to calculate costs and emission reductions are discussed in the memorandum, *Technical Analysis and Documentation to Support EPA's Reconsideration of 40 CFR Part 63 Subpart HHHHHHHH National Emission Standards for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking.

TABLE 2. COMPARISON OF 2012 FINAL MAJOR SOURCE EMISSION LIMITS AND PROPOSED EMISSION LIMITS FOR PVC PROCESS VENTS

Pollutant	2012 Final Major Rule Emission Limits For PVC Process Vents		Proposed Emission Limits For PVC Process Vents	
	Existing Sources	New Sources	Existing Sources	New Sources
Vinyl Chloride <sup>1</sup>	6.0	0.56	0.85	0.85
Total Organic HAP <sup>1</sup>	56	5.5	22	1.3
HCl <sup>1</sup>	78	0.17	0.64	0.17
Dioxins/Furans <sup>2</sup>	0.038	0.038	0.035	0.035
THC <sup>3</sup>	9.7	7.0	5.1	2.2

<sup>1</sup> parts per million by volume dry (ppmvd) @ 3-percent (%) oxygen (O<sub>2</sub>)

<sup>2</sup> nanograms per dry standard cubic meters (ng/dscm) @ 3% O<sub>2</sub> toxic equivalency (TEQ)

<sup>3</sup> ppmvd as propane @ 3% O<sub>2</sub>

TABLE 3. COMPARISON OF 2012 FINAL MAJOR SOURCE EMISSION LIMITS AND PROPOSED EMISSION LIMITS FOR PVC-COMBINED PROCESS VENTS

Pollutant	2012 Final Major Rule Emission Limits For PVC-Combined Process Vents		Proposed Emission Limits For PVC-Combined Process Vents	
	Existing Sources	New Sources	Existing Sources	New Sources
Vinyl Chloride <sup>1</sup>	1.1	0.56	0.85	0.85
Total Organic HAP <sup>1</sup>	9.8	5.5	9.7	5.9
HCl <sup>1</sup>	380	1.4	3.9	1.4
Dioxins/Furans <sup>2</sup>	0.051	0.034	0.68	0.051
THC <sup>3</sup>	4.2	2.3	9.1	2.2

<sup>1</sup> ppmvd @ 3% O<sub>2</sub>

<sup>2</sup> ng/dscm @ 3% O<sub>2</sub> TEQ

<sup>3</sup> ppmvd as propane @ 3% O<sub>2</sub>

We are proposing the revised major source process vent emission limits in new Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH; and we are proposing that all affected major sources that commenced construction or reconstruction on or before May 20, 2011, must be in compliance with these changes within 3 years after the date of publication of the final rule in the **Federal Register**. We also are proposing that all affected major sources that commenced construction or reconstruction after May 20, 2011, must be in compliance with these changes upon the date of publication of the final rule in the **Federal Register** or initial startup, whichever is later. We are not aware of any major sources that have commenced construction or reconstruction after May 20, 2011, which would be impacted by the application of the changes. See proposed 40 CFR 63.11875(e). Also, at any time before these compliance dates, we are proposing at 40 CFR 63.11880(d) that an affected major source may choose to comply with the revised emission limits in Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH, in lieu of the emission limits in Tables 1 and 2 to 40 CFR part 63, subpart HHHHHHHH. Also, as

previously mentioned in section II of this preamble, on September 28, 2012, the EPA granted reconsideration on the emission limits. We are not making any changes to the process vent emission limits in the area source rule; however, we request public comments on these emission limits.

Finally, we are proposing to revise several paragraphs throughout the 2012 final major and area source rules, (including process vent related requirements in 40 CFR 63.11925 through 63.11950) to properly reference the proposed Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH. For example, for 40 CFR part 63, subpart DDDDDDD, although 40 CFR 63.11925 is referenced in 40 CFR 63.11142(f)(8), we are proposing to revise the introduction paragraph at 40 CFR 63.11142(f) to ensure that whenever reference is made to Tables 1, 1b, 2, or 2b to 40 CFR part 63, subpart HHHHHHHH, we mean Table 1 or 2 to 40 CFR part 63, subpart DDDDDDD, for purposes of compliance with the 2012 area source process vent standards. We are also proposing several other editorial corrections and clarifications to the process vent requirements in 40 CFR 63.11925 through 63.11950. These proposed amendments are discussed in section III.I of this preamble.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, the revised subcategories for process vents, the clarifications to 40 CFR 63.11140(c), 63.11865, 63.11925(a), and 63.12005 addressing comingled vent streams, the elimination of the emission limits for PVC-combined process vents in the 2012 final area source rule, the revised major source process vent emission limits, the compliance dates, and whether there are any sources that commenced construction after May 20, 2011). Except for the proposed major source process vent emission limits, we note (as previously mentioned) that all of the other proposed changes discussed in this section of the preamble are also being proposed for the 2012

area source rule at 40 CFR 63.11142(f)(8) through (13) and 63.11144 because 40 CFR 63.11925 through 63.11950 and 63.12005 are referenced in those requirements. If it is determined that there are sources that have commenced construction or reconstruction after May 20, 2011, then we will need to add additional requirements.

### *B. Process Wastewater*

The 2012 final major source rule contains vinyl chloride and total non-vinyl chloride organic HAP (TOHAP) emission limits for process wastewater. For the 2012 final major source rule, the vinyl chloride emission limits were calculated based on one year of sampling data provided post-proposal by the industry. The major source TOHAP emission limits were based on information and data provided by industry in response to the August 21, 2009, CAA section 114 ICR, corrections to those data provided by the PVC industry during the public comment period, and supplemental wastewater sampling data provided during the public comment period by one PVC manufacturer. The August 21, 2009, CAA section 114 ICR is documented in the memoranda, *Information Collection for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category and Updated Information Collection and Additional Data Received for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which are available in the docket for this rulemaking (see Docket Item Nos. EPA-HQ-OAR-2002-0037-0099 and EPA-HQ-OAR-2002-0037-0197, respectively). Refer to the preamble of the 2012 final major and area source rules (see section III of the 2012 final preamble, 77 FR 22850) for additional details about the emission limits for process wastewater.<sup>5</sup>

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<sup>5</sup> We note that subsequent to the April 17, 2012, rulemaking, PVC industry stakeholders notified the EPA that the data used to set the new and existing area source TOHAP process wastewater emission limits were not based on data from the PVC Production source category. The EPA agreed with the PVC industry stakeholders and on February 4, 2015, the EPA issued a direct final rule (80 FR 5938, February 4, 2015) withdrawing the TOHAP process wastewater emission standards in 40 CFR part 63, subpart DDDDDD, for new and existing PVC production area sources.

Petitioners primarily argue that it was not feasible to comment on the new data on which the EPA based the final process wastewater emission limits; and as previously mentioned in section II of this preamble, on September 28, 2012, the EPA granted reconsideration on this issue. The petitioners argued that the EPA did not base the TOHAP emission limits on emission levels actually achieved by the best performing sources in the source category. One of the petitioners said that the EPA did not provide rationale for why nine out of 18 facilities (for which it had data) represented the top performing sources. Other petitioners argued that the data points do not reflect actual samples of PVC facility process wastewater taken during actual operations.

In response to the petitioner's claims, the EPA issued a CAA section 114 ICR on November 8, 2012, to PVC production companies to gather data to inform the reconsideration and potential revision of the process wastewater emission limits in the 2012 final major and area source rules. Also, the EPA issued an additional CAA section 114 ICR on April 1, 2014, to two companies that were not included in the November 8, 2012, CAA section 114 request. These two CAA section 114 ICRs are available in the docket for this rulemaking (see Docket Item Nos. EPA-OAR-2002-0037-0543, EPA-OAR-2002-0037-0592, EPA-OAR-2002-0037-0593, and EPA-OAR-2002-0037-0594). The data collected are discussed in the memorandum, *Technical Analysis and Documentation to Support EPA's Reconsideration of 40 CFR Part 63 Subpart HHHHHHH National Emission Standards for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking. Each owner or operator was required to take one grab sample from each PVC process wastewater treatment stream for 30 consecutive days and then analyze the samples for specified HAP using the prescribed EPA test methods. If a facility had a batch PVC operation that did not operate 30 consecutive days, then it was required to collect samples at least once for each day while any

batch wastewater treatment system was operating such that at least 30 samples were analyzed. Data were also collected on other wastewater streams (*i.e.*, streams not stripped and streams slated for on-site or off-site biological treatment units), including average flow rate characteristics, origination, and destination information. After reviewing all of the additional process wastewater data that we collected since the promulgation of the 2012 final major and area source rules, we are proposing changes to the 2012 final major and area source rules.

First, we are proposing to revise the process wastewater vinyl chloride emission limit for major sources. Under the proposed amendments, process wastewater streams at existing major sources would be required to meet an emission limit of 0.73 parts per million by weight (ppmw) for vinyl chloride (in lieu of the 6.8 ppmw vinyl chloride process wastewater emission limit in the 2012 major source rule for existing affected sources) before being exposed to the atmosphere or discharged from the affected source (see proposed Table 1b to 40 CFR part 63, subpart HHHHHHH). Process wastewater streams at new major sources would be required to meet an emission limit of 0.57 ppmw for vinyl chloride (in lieu of the 0.28 ppmw vinyl chloride process wastewater emission limit in the 2012 major source rule for new affected sources) before being exposed to the atmosphere or discharged from the affected source (see proposed Table 2b to 40 CFR part 63, subpart HHHHHHH). Given the large amount of data obtained, we calculated these MACT floors (*i.e.*, the proposed 0.73 ppmw and 0.57 ppmw vinyl chloride emission limits for existing and new major sources, respectively) using a 99-percent upper limit calculation. Also, we analyzed a beyond-the-floor option for controlling vinyl chloride from process wastewater at existing sources, specifically evaluating the cost and emissions reductions for an existing facility to meet the level of control that we are proposing for new sources, based on replacement of their existing wastewater steam stripper. We determined that the overall annual cost (including

installation and operation) would be about \$11 million, and the annual emissions reductions would be 1.3 tons of HAP per year (approximately \$8.6 million/ton cost effectiveness). Furthermore, the only beyond-the-floor option we identified for new sources is a larger or secondary steam stripper. However, similar to the analysis for existing sources, installing a larger or secondary steam stripper at a new source to achieve beyond-the-MACT-floor level of control would also not be cost effective (*i.e.*, higher cost with potentially less HAP removal than existing sources). We did not identify any other measures or control technologies to further reduce emissions from process wastewater in the PVC production industry. Based on this analysis, we are proposing that it is not cost effective to go beyond-the-floor for process wastewater at existing or new sources. Our MACT floor emission limit calculations, beyond-the-floor analysis, and the methodology we used to calculate costs and emission reductions are discussed in the memorandum, *Technical Analysis and Documentation to Support EPA's Reconsideration of 40 CFR Part 63 Subpart HHHHHHH National Emission Standards for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking. Also, as previously mentioned in section II of this preamble, on September 28, 2012, the EPA granted reconsideration on the emission limits. We are not making any changes to the wastewater emission limits in the area source rule; however, we request public comments on these emission limits.

Second, we are proposing to remove the major source process wastewater TOHAP emission limit and establish vinyl chloride as a surrogate for TOHAP for major and area sources. As noted above, petitioners argue that the EPA did not base the TOHAP emission limits on emission levels actually achieved by the best performing sources in the source category. One of the petitioners said that the EPA did not set the MACT floor using data for the top performing

sources. Another petitioner argued that the data points do not reflect actual samples of PVC facility process wastewater taken during actual operations. We are proposing to eliminate the process wastewater TOHAP emission limit and to be more fully responsive to the court's original request that the EPA "properly explain its methodology for regulating [HAP] emitted in PVC production other than vinyl chloride by use of a surrogate." See *Mossville Environmental Action Now v. EPA*, 370 F.3d at 1232 (D.C. Cir. 2004). In this proposal, we have redetermined and are further explaining the basis for our conclusion that vinyl chloride is a suitable surrogate for establishing process wastewater emission limits for organic HAP. We note that the court (370 F.3d at 1242–43) held that the EPA has authority to use a surrogate "if it is reasonable to do so[.]" For the reasons discussed below, we have determined that vinyl chloride is a reasonable surrogate for TOHAP emitted from process wastewater at PVC production facilities.

Steam stripping is an effective wastewater treatment technology that has been used as the basis of wastewater emission control requirements in many rules, including the 40 CFR part 63 MACT for chemical process industries, such as the HON, Miscellaneous Organic Chemical Manufacturing NESHAP, and Polymers and Resins NESHAP as well as the 40 CFR part 61 Benzene Waste Operations NESHAP. The approach is based on the idea that removal of pollutants from wastewater prior to discharge into a facility's wastewater collection and treatment system will limit air emissions resulting from volatilization of these pollutants from downstream process drains and conveyances that are open to the atmosphere, as well as from the downstream biological treatment system, including biological treatment units that are agitated and aerated to supply the microorganisms with O<sub>2</sub>. Conversely, those pollutants that are not effectively removed by a steam stripper will be even less likely to volatilize in collection and treatment and will be controlled in the facility's biological treatment system.

All PVC manufacturers have high concentrations of vinyl chloride in their process wastewater and steam stripping is widely used by PVC manufacturers to remove and recover vinyl chloride from process wastewater streams. The best performers that the MACT floor is based on are those strippers that have the lowest vinyl chloride concentrations in the bottoms (outlet) stream exiting the steam stripper; that is, the most effective strippers are those that result in the lowest concentration of vinyl chloride in the bottoms stream.

Based on the data we received in response to our CAA section 114 ICRs of PVC manufacturers, 33 non-vinyl chloride HAP are also present in the bottoms of the stripped wastewater streams. While many of these non-vinyl chloride HAP are removed using steam stripping, some are removed to a lesser degree. The EPA thoroughly examined the fundamentals of steam stripping wastewater (including calculating the HAP fraction removed (Fr) values<sup>6</sup> for a model steam stripper and the fraction emitted (Fe) values<sup>7</sup> for numerous HAP from wastewater) during the original rulemaking of the HON (see Legacy Docket A-90-23). Based on this information as well as the data we received in response to our CAA section 114 ICRs, we determined that 25 of the 33 non-vinyl chloride HAP in the stripped wastewater have lower concentrations than the average vinyl chloride concentration and have Fr values of 0.99 which is the same Fr value for vinyl chloride.<sup>8</sup> In other words, vinyl chloride and most non-vinyl chloride

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<sup>6</sup> The Fr is the mass fraction of a HAP that is stripped from the wastewater. The Fr values for individual HAP in a model steam stripper were estimated using Henry's Law Constants at 100 degrees Celsius during the development of the HON. See 57 FR 62641, December 31, 1992; 59 FR 19443 and 4, April 22, 1994; and the memoranda, *Henry's Law Constants for the 83 HAP's Regulated in the Proposed HON Wastewater Provisions*; and *Efficiency of Steam Stripper Trays to Treat Wastewater Streams: Prediction of the Fraction Removed (Fr) for Specific Compounds*, which are available in the docket for this rulemaking.

<sup>7</sup> The Fe is the mass fraction of a HAP that is emitted from the wastewater collection and downstream biological treatment system. The Fe values for individual HAP were calculated during the development of the HON. See 57 FR 62641, December 31, 1992; 59 FR 19443 and 4, April 22, 1994; and the memorandum, *Estimation of Air Emissions from Model Wastewater Collection and Treatment Plants Systems*, which is available in the docket for this rulemaking.

<sup>8</sup> See the memorandum, *Analysis of HAP in PVC Process Wastewater*, which is available in the docket for this rulemaking.

HAP are effectively removed from the wastewater stream using steam stripping. We, therefore, conclude that vinyl chloride is a reasonable surrogate for these HAP. Although the remaining eight non-vinyl chloride HAP have stripper bottoms concentrations higher than vinyl chloride and have Fr values from 0.31 (methanol) to 0.99 (vinyl acetate),<sup>9</sup> these HAP are not likely to be emitted to the atmosphere because these HAP have low Fe values, significantly less than that of vinyl chloride. The Fe values for these compounds range from 0 (ethylene glycol) to 0.59 (vinyl acetate), compared to vinyl chloride's Fe value of 0.97. As a result, these HAP other than vinyl chloride that remain in the stripped wastewater are more likely to remain in the wastewater collection system and will be readily biodegraded in the biological treatment unit. Furthermore, we observed that non-vinyl chloride HAP concentrations at the outlet of the steam stripper are the result of varied resin recipe slates in use throughout the industry, and, therefore, do not correlate with the effectiveness of the steam stripper at removing vinyl chloride. For example, resin grade recipes lower in hard-to-strip TOHAP could allow for poorer stripper performance if TOHAP were being relied to determine MACT. Therefore, the steam strippers that are the best performers can be identified by their low vinyl chloride concentrations and not by the non-vinyl chloride HAP concentrations in the stripper bottoms.

In summary, vinyl chloride serves as an appropriate surrogate for determining the MACT floor for process wastewater. First, vinyl chloride is the predominant HAP and is present in all process wastewater streams. Second, the best performing strippers are identified by low vinyl chloride concentrations in the stripper bottoms and are also the most effective strippers at removing non-vinyl chloride HAP. The other non-vinyl chloride HAP present in the stripper

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<sup>9</sup> Only three of 15 facilities reported data where vinyl acetate concentrations in the stripper bottoms were higher than vinyl chloride. One facility is no longer in operation and the other two are vinyl chloride/vinyl acetate copolymer producers. Therefore, the higher vinyl acetate fraction is likely the result of resin recipe influence rather than stripper performance since vinyl chloride and vinyl acetate have the same Fr value.

bottoms are a reflection of the resin recipe and not the effectiveness of the stripper. The non-vinyl chloride HAP that are in the stripper bottoms will not volatilize in collection systems and be effectively treated in the biological treatment unit. The regulatory objective of this rule is to control air emissions of HAP from wastewater streams and not to control HAP that are in the wastewater streams. Focusing on vinyl chloride rather than total organic HAP for setting standards for PVC process wastewater not only ensures identification of the best performing wastewater strippers for the primary HAP emitted from the source category, but also ensures the effective control of air emissions of non-vinyl chloride organic HAP from wastewater.<sup>10</sup> Additional details about our proposed surrogacy are provided in the memorandum, *Analysis of HAP in PVC Process Wastewater*, which is available in the docket for this rulemaking.

We are proposing these changes (*i.e.*, to revise the process wastewater vinyl chloride emission limit and eliminate the process wastewater TOHAP emission limit) in new Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHH; and we are proposing that all affected major sources that commenced construction or reconstruction on or before May 20, 2011, must be in compliance with these changes within 3 years after the date of publication of the final rule in the **Federal Register**. We also are proposing that all affected major sources that commenced construction or reconstruction after May 20, 2011, must be in compliance with these changes upon the date of publication of the final rule in the **Federal Register** or initial startup, whichever is later. See proposed 40 CFR 63.11875(e). We are not aware of any major sources that have commenced construction or reconstruction after May 20, 2011, which would be impacted by the application of the changes. Also, at any time before these compliance dates, we are proposing at 40 CFR 63.11880(d) that an affected major source may choose to comply with the revised

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<sup>10</sup> See 57 FR 62641, December 31, 1992.

emission limits in Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH, in lieu of the emission limits in Tables 1 and 2 to 40 CFR part 63, subpart HHHHHHHH.

Finally, we are proposing to revise several paragraphs throughout the major source rule (including process wastewater related requirements in 40 CFR 63.11965 through 63.11985) to properly reference the proposed Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH, and to address the elimination of the major source process wastewater TOHAP emission limit; and we are proposing to clarify in 40 CFR 63.11965(e) that only 40 CFR 63.105(b) and (c) apply to maintenance wastewater containing HAP listed in Table 10 to 40 CFR part 63, subpart HHHHHHHH. We are also proposing to correct a typographical error in Table 9 to 40 CFR part 63, subpart HHHHHHHH, to be consistent with the requirement at 40 CFR 63.11980(a)(4)(i). Specifically, we are clarifying in Table 9 to 40 CFR part 63, subpart HHHHHHHH, that compliance with the wastewater emission limit is based on the results from one grab or composite sample.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, the revised process wastewater vinyl chloride emission limits, the elimination of the process wastewater TOHAP emission limits, the compliance dates, whether there are any sources that commenced construction after May 20, 2011, the clarification to 40 CFR 63.11965(e), and the correction in Table 9 to 40 CFR part 63, subpart HHHHHHHH). We note that the proposed clarification in 40 CFR 63.11965(e) is also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(17) because 40 CFR 63.11965 is referenced in those requirements; however, the proposed process wastewater vinyl chloride emission limits do not affect the 2012 area source rule at 40 CFR 63.11142(f)(17). Although 40 CFR 63.11965 through 63.11980 are referenced in 40 CFR 63.11142(f)(17), we are proposing to revise the introduction

paragraph at 40 CFR 63.11142(f) to ensure that whenever reference is made to Tables 1, 1b, 2, or 2b to 40 CFR part 63, subpart HHHHHHHH, we mean Table 1 or 2 to 40 CFR part 63, subpart DDDDDDD, for purposes of compliance with the 2012 area source wastewater standards. If it is determined that there are major sources that have commenced construction or reconstruction after May 20, 2011, then we will need to add additional requirements.

### *C. Stripped Resin*

#### 1. Subcategories and Emission Limits

Petitioners maintain that it was not feasible to comment on the new data on which the EPA based the final stripped resin emission limits and subcategories; and as previously mentioned in section II of this preamble, on September 28, 2012, the EPA granted reconsideration on the emission limits. We are not making any changes to the stripped resin emission limits and subcategories in the 2012 final major and area source rules; however, we request public comments on these emission limits and subcategories.

#### 2. Alternative Emission Limit Format for Compliance with Stripped Resin Standards

The existing Vinyl Chloride NESHAP (40 CFR part 61, subpart F) provides emissions standards for the sources following the stripper “stated in two ways” (40 FR 59541, December 24, 1975). One of these two formats for emissions standards is in ppmw of the stripped resin at the outlet of the stripper and is used in both 40 CFR part 61, subpart F, and the 2012 final major and area source rules, as seen in 40 CFR 61.64(e)(1), Tables 1 and 2 to 40 CFR part 63, subpart DDDDDDD, and Tables 1 and 2 to 40 CFR part 63, subpart HHHHHHHH. The second format is a mass emissions to the atmosphere, which is given as gram (g) HAP per kilogram (kg) of product resin on a dry basis from the stripper (also given in pound per ton format) and is only currently available in 40 CFR 61.64(e)(2). The EPA originally offered these two “ways” of presenting an

equivalent emission limit to acknowledge that there were two distinctively different techniques to control these sources – add-on control devices or improved stripping, and that different measurement and enforcement methods are applicable to each technique (40 FR 59541).<sup>11</sup> At the time, we also acknowledged that stripping is the primary control technology on which the standards are based, lending credence for including the ppmw format resin standard in the 2012 final major and area source rules. However, we realize that some sources may find compliance flexibility in complying with a mass emissions limit instead of a stripped resin content, especially if centrifuges, blend tanks, and other process components downstream of the stripper are closed to the atmosphere, controlled with closed vent systems, and routed to a control device. Therefore, we have calculated mass emissions-formatted standards that are equivalent to the resin content standards of the 2012 final major and area source rules using the conversion methods used in the original 40 CFR part 61, subpart F standards (*i.e.*, converting the ppmw standard to g/kg, or part per thousand by weight for the equivalent mass emission rate), and we are proposing to include these alternative emission limits in Tables 1 and 2 to 40 CFR part 63, subpart DDDDDD, and Tables 1b and 2b to 40 CFR part 63, subpart HHHHHHHH. In doing so in the same manner as the original 40 CFR part 61, subpart F standards, we are ensuring that the alternate emission limits can be implemented and enforced, will be clear to sources, and most importantly, will be equivalent to the level of control required by the MACT standards. We are proposing at 40 CFR 63.11960(b)(2) that if the affected source chooses to comply with the alternative mass emission rates, then the process components associated with the stripped resin

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<sup>11</sup> The EPA noted that the two emission limits “are equivalent if it is assumed that all residual vinyl chloride in the resin leaving a stripper is emitted into the atmosphere at the polyvinyl chloride plant.” While acknowledging that a small proportion of vinyl chloride might be left in the resin when it leaves the plant, the residual vinyl chloride monomer left in the resin after stripping would be emitted into the atmosphere at some point, and, therefore, the EPA determined that the residual vinyl chloride monomer in resin limits serve as an emission limitation “specified in a form which is compatible with the only practical method for determining compliance.”

downstream of the resin stripper (*e.g.*, dryers, centrifuges, filters) must be enclosed and routed through a closed vent system meeting the requirements in 40 CFR 63.11925 through 63.11950 for the closed vent system and control device. We are also proposing calculation procedures at 40 CFR 63.11960(g) and (h) that you must use if you elect to demonstrate initial or continuous compliance with the alternative mass emissions rates. In addition, we are proposing to clarify the reporting and recordkeeping at 40 CFR 63.11985(b)(7) and 40 CFR 63.11990(h)(3) to reflect the proposed option of complying with the alternative mass emissions rates. The monitoring requirements for sources using the alternative emission limits would include the same stack testing methods and procedures required for process vent performance testing instead of resin sampling and concentration analyses. By proposing these alternative emission limits, we are providing the same level of compliance flexibility afforded by the Vinyl Chloride NESHAP. Tables 4 and 5 of this preamble present the proposed mass emission limits for existing and new sources, respectively. The EPA requests comment on the proposed alternative emission limits. We note that all of the proposed changes discussed in this section of the preamble (*i.e.*, the proposed changes to 40 CFR 63.11960, 40 CFR 63.11985(b)(7), and 40 CFR 63.11990(h)(3)) are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(16), (18), and (19) because 40 CFR 63.11960, 40 CFR 63.11985, and 40 CFR 63.11990 are referenced in those requirements.

TABLE 4. PROPOSED EXISTING SOURCE STRIPPED RESIN ALTERNATIVE MASS EMISSION LIMITS

Resin Subcategory	40 CFR part 63, subpart HHHHHHH Vinyl Chloride Emission Limit (g/kg)	40 CFR part 63, subpart HHHHHHH Non-vinyl Chloride Organic HAP Emission Limit (g/kg)	40 CFR part 63, subpart DDDDDD Vinyl Chloride Emission Limit (g/kg)	40 CFR part 63, subpart DDDDDD Non-vinyl Chloride Organic HAP Emission Limit (g/kg)

Bulk resin	0.0071	0.17	0.0071	0.17
Dispersion resin	1.3	0.24	1.5	0.32
Suspension resin	0.037	0.67	0.036	0.036
Suspension blending resin	0.14	0.50	0.14	0.50
Copolymer resin	0.79	1.9	0.79	1.9

TABLE 5. PROPOSED NEW SOURCE STRIPPED RESIN ALTERNATIVE MASS EMISSION LIMITS

Resin Subcategory	40 CFR part 63, subpart HHHHHHHH Vinyl Chloride Emission Limit (g/kg)	40 CFR part 63, subpart HHHHHHHH Non-vinyl Chloride Organic HAP Emission Limit (g/kg)	40 CFR part 63, subpart DDDDDDD Vinyl Chloride Emission Limit (g/kg)	40 CFR part 63, subpart DDDDDDD Non-vinyl Chloride Organic HAP Emission Limit (g/kg)
Bulk resin	0.0071	0.17	0.0071	0.17
Dispersion resin	0.48	0.066	1.5	0.32
Suspension resin	0.0073	0.015	0.036	0.036
Suspension blending resin	0.14	0.50	0.14	0.50
Copolymer resin	0.79	1.9	0.79	1.9

### 3. Clarification of Initial and Continuous Monitoring of Non-Vinyl Chloride Organic HAP

The EPA’s intent for demonstrating compliance with the total non-vinyl chloride organic HAP emission limits for stripped resin within 40 CFR 63.11960(b) (and as referenced in 40 CFR 63.11142(f)(16) for area sources) is for facilities to develop and maintain a specific list of non-vinyl chloride organic HAP that are expected to be present in each grade of resin produced by the PVCPU. The current rule language in 40 CFR 63.11960(b) is potentially unclear on how this list of HAP for each resin grade is updated and used to demonstrate compliance and how this list of HAP for each resin grade relates to the list of HAP contained within Table 10 to 40 CFR part 63, subpart HHHHHHHH. For example, in 40 CFR 63.11960(b), we are proposing to replace “continuously updated” with “kept current” to clarify the requirement that the facility-specific HAP list is updated after any change occurs that would impact the list of HAP for the stripped

resin, such as using a new additive or changing a vendor.

In addition, as discussed in the 2012 final major and area source rules (77 FR 22868), the EPA's intent is for sources to initially and continuously test for all the HAP listed in Table 10 to 40 CFR part 63, subpart HHHHHHHH, plus any additional HAP not listed in Table 10 to 40 CFR part 63, subpart HHHHHHHH, but expected to be present in the resin grade due to the owner or operator's process knowledge. That is, the facility-specific HAP list comprises the 30 HAP in Table 10 to 40 CFR part 63, subpart HHHHHHHH, plus any additional HAP beyond those 30 that are expected to be present based on the resin grades produced. The EPA is proposing clarifying amendments to 40 CFR 63.11960(b) and 40 CFR 63.11960(e)(1)(i) through (iv) related to the specific HAP list, and we request comment on this clarification. Furthermore, we are proposing amendments to 40 CFR 63.11960(b)(2) that provide these clarifications on the facility-specific HAP list for sources opting to comply with the proposed alternative mass emission limits that are discussed in section III.C.2 of this preamble. Finally, we are also proposing to restructure 40 CFR 63.11960(c) to improve readability. We are proposing to remove duplicative language from 40 CFR 63.11960(c)(1)(iii) and (iv) and revise 40 CFR 63.11960(c)(2)(i) and (ii) to clarify the calculation requirements for vinyl chloride and non-vinyl chloride organic HAP.

We note that these amendments are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(16) because 40 CFR 63.11960 is referenced in those requirements.

#### *D. Storage Vessels*

We are proposing technical corrections and clarifications related to the standards for pressure vessels, the use of vapor balancing, and the standards for fixed roof and floating roof storage vessels. See sections III.D.1, 2, and 3 of this preamble, respectively for a detailed discussion of these proposed changes.

## 1. Pressure Vessels

A petitioner requested that the EPA reconsider the requirements of 40 CFR 63.11910(c) and allow LDAR of all pressure vessel leaks, including from closure devices. The petitioner stated that the rule should apply LDAR as a work practice standard under CAA section 112(h) for leaks from openings on pressure vessels that are equipped with closure devices since it is “not feasible to prescribe or enforce an emission standard.” The petitioner stated that the best performing facilities use LDAR to manage leaks from pressure vessels and contended that an allowance to make a repair once a leak is found is a common approach for managing leaks from pressure vessels and is the only achievable approach. The petitioner also stated it interprets the 2012 final major and area source rules to be that leaks from closure devices are violations (according to 40 CFR 63.11910(c)(4)), while other pressure vessel leaks are not violations and are subject to leak repair provisions (according to 40 CFR 63.11910(c)(3)). The petitioner requested that the EPA allow for repair of leaks from closure devices greater than 500 parts per million (ppm) as a method of compliance.

In the 2012 final major and area source rules, pressure vessels in HAP service are required to operate as “a closed system that does not vent to the atmosphere” and each opening must be equipped with a closure device to prevent discharges to the atmosphere (40 CFR 63.11910(c)). In addition, in the 2012 final major and area source rules, all potential leak interfaces on the vessel (including closure devices) must be monitored annually for leaks. The intent of the 2012 final major and area source rules was to require that pressure vessels operate with no detectable emissions (*i.e.*, less than 500 ppm as determined using EPA Method 21 of 40 CFR part 60, appendix A-7), and that each opening, including all potential leak interfaces, on pressure vessels be monitored regularly to ensure that the pressure vessels are operating with no

detectable emissions. While the 2012 final major and area source rules do require potential leak interfaces to be monitored annually for leaks using the procedures specified in the equipment leak requirements at 40 CFR 63.11915, we recognize that the 2012 final major and area source rules do not specify how 40 CFR 63.11915 would specifically apply to pressure vessels and, thus, the petitioner interpreted the rule to have two sets of leak requirements (one for closure devices and another for all other pressure vessel leaks).

The EPA is granting reconsideration of the pressure vessel standards of 40 CFR 63.11910(c) but does not agree with the petitioner's recommendations regarding LDAR. Specifically, the EPA is not allowing for repair of leaks greater than 500 ppm as a method of compliance. We are proposing to maintain the pressure vessel leak requirements of the 2012 rules, with edits for clarity; pressure vessels must operate with no detectable emissions and any release greater than 500 ppm above background is a violation. This requirement applies equally to closure device leaks and leaks from all other leak interfaces on the pressure vessel. To confirm there are no detectable emissions, we are proposing to specify (in lieu of generally pointing to the LDAR requirements in 40 CFR 63.11915) that the affected source must conduct annual monitoring of each potential leak interface and each point on the pressure vessel through which HAP could potentially be emitted, using the procedures specified in 40 CFR 63.1023(b) and (c). This approach to regulating pressure vessel leaks is similar to the Off-Site Waste and Recovery Operations NESHAP (40 CFR part 63, subpart DD), which stipulates that tank openings must be equipped with closure devices that are designed to operate with no detectable emissions (see 40 CFR 63.685(h)(2)). We also propose to streamline and combine the requirements at 40 CFR 63.11910(c)(3) and (4) for clarity. Under the proposed language, 40 CFR 63.11910(c)(3) includes the requirement to perform annual monitoring and states a leak greater than 500 ppm is

a violation. We are proposing to remove certain language specific to pressure vessel closure devices (which was previously at 40 CFR 63.11910(c)(4)), because closure device leaks would be captured by the proposed language at 40 CFR 63.11910(c)(3) (*i.e.*, monitor each potential leak interface and each point on the pressure vessel through which HAP could potentially be emitted). We are also proposing to revise the language at 40 CFR 63.11890(d)(5)(iv) to apply more generally to pressure vessel leaks instead of just closure devices; this edit directly aligns with the proposed language at 40 CFR 63.11910(c)(3). In addition, we are proposing a definition of “closure device” at 40 CFR 63.12005 to mean a cover, cap, hatch, lid, plug, seal, valve, or other type of fitting that, when the device is secured in the closed position, prevents or reduces air emissions to the atmosphere by blocking an opening in a fixed roof storage vessel or pressure vessel.

As part of the leak monitoring revisions, we are proposing to revise 40 CFR 63.11990(b)(4) to clarify that the pressure vessel leak records must include the information already required to be reported in the pressure vessel closure device deviation report pursuant to 40 CFR 63.11985(b)(10)(i) through (v) (*e.g.*, we are proposing to keep records of the quantity of vinyl chloride and total HAP released from the closure device).

The EPA is also proposing to clarify the requirements for filling, emptying, and purging of pressure vessels at 40 CFR 63.11910(c)(1). The clarifications are based on actual operations of PVC production facilities and focus on the underlying pressure vessel standard. Importantly, we are emphasizing that the underlying standard is that each pressure vessel must be designed and operated as a closed system without emissions to the atmosphere. The language at 40 CFR 63.11910(c)(1) stating that the vent stream during filling, emptying, and purging must meet the requirements of 40 CFR 63.11925(a) and (b) may appear to contradict the underlying standard

that pressure vessels must be designed and operated as a closed system without emissions to the atmosphere.

To better explain our intent in clarifying the proposed language at 40 CFR 63.11910(c)(1), one must consider where pressure vessels are used at PVC production facilities, which is primarily for vinyl chloride storage (the monomer that is used as a reactant in the polymerization reaction to produce PVC). During filling operations, pressure vessels are designed to operate as closed systems, so there are no emissions from these sources during these periods. Once filled, pressure vessels storing vinyl chloride are emptied by routing the stored vinyl chloride to the process to be used in the polymerization reaction. Once routed to the process, process vents may be created that are subject to the process vent standards of 40 CFR 63.11925(a) and (b) which include closed vent system requirements. In the case of vent streams that contain any unreacted vinyl chloride, these streams are typically routed to a recovery system and vinyl chloride is recovered (to the extent practical) and sent back to the pressure vessel (which still operates as a closed system without emissions to the atmosphere). The remaining (noncondensable) vent stream containing small amounts of unrecovered vinyl chloride (and possibly other compounds) then must be controlled in order to comply with the process vent emission limits. This was the intent of the language in the 2012 final major and area source rules. Similarly, for purging operations, vinyl chloride is typically sent to a recovery system and the recovered vinyl chloride is then sent to a different pressure vessel also storing vinyl chloride (which operates as a closed system without emissions to the atmosphere). The remaining stream from the recovery system and the pressure vessel being purged contains small amounts of unrecovered vinyl chloride (and possibly other compounds) and must be controlled in order to comply with the process vent emission limits. Thus, excluding those emissions during filling,

purging, and emptying that ultimately end up as process vents that are routed to a closed vent system and control device, there would still be no emissions to the atmosphere directly from pressure vessels. We are proposing to clarify at 40 CFR 63.11910(c)(1) that for vent streams sent to the process from pressure vessels, or purged from pressure vessels, facilities must prepare a design evaluation to demonstrate certain conditions are met and meet the requirements of 40 CFR 63.11925(a) and (b) including the closed vent system requirements. We also note that we are proposing that facilities may elect to comply with vapor balancing requirements during filling operations. Vapor balancing does not result in emissions to the atmosphere from pressure vessels and is a common equivalent control option for PVC production facilities during filling operations (vapor balancing requirements are discussed in greater detail in section III.D.2 of this preamble).

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, the proposed changes to the pressure vessel requirements in 40 CFR 63.11910(c), 40 CFR 63.11985(b)(10), and 40 CFR 63.11990(b)(4)). We note that all of these proposed changes are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(5), (18), and (19) because 40 CFR 63.11910, 40 CFR 63.11985, and 40 CFR 63.11990 are referenced in those requirements.

## 2. Vapor Balancing

A petitioner asserted that in the 2012 final major and area source rules, the EPA did not specifically allow vapor balancing as a method to control emissions from storage vessels. The petitioner stated that vapor balancing is widely used in the PVC industry, indicated that 11 PVC production facilities use vapor balancing, and claimed it is virtually impossible to unload a vinyl

chloride railcar and not have any HAP emissions without using vapor balancing. The petitioner also noted that vapor balancing is allowed by the EPA in other MACT rules.

The EPA agrees with the petitioner and is granting reconsideration on allowing vapor balancing as a method to control emissions from storage vessels. The 2012 final major and area source rules do not list vapor balancing as a compliance option, but in responding to comments in the 2012 final rules (refer to *National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production: Summary of Public Comments and Responses*, Docket Item No. EPA-HQ-OAR-2002-0037-0185), we stated that a PVC production facility may request the EPA's approval to use vapor balancing as an alternative means of emission limitation under 40 CFR 63.6(g) of the General Provisions. The EPA acknowledges that vapor balancing is a proven method to control emissions from storage vessel filling operations and is already allowed by several MACT standards including the HON (40 CFR part 63, subpart G). Therefore, the EPA is proposing vapor balancing requirements at 40 CFR 63.11910(e) to allow vapor balancing as an equivalent option to no emissions from pressure vessels during filling operations (see proposed 40 CFR 63.11910(c)) and as an optional equivalent control method for fixed roof storage vessels complying with the 95-percent control standard for HAP emissions in Table 3 to 40 CFR part 63, subpart HHHHHHH, during filling operations<sup>12</sup> (see proposed 40 CFR 63.11910(d)). The proposed vapor balancing requirements at 40 CFR 63.11910(e) are similar to the HON requirements and include operating, monitoring, and certification requirements and related recordkeeping requirements.

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<sup>12</sup> We note that facilities that use vapor balancing for filling operations for fixed roof storage vessels that are required to route emissions to a closed vent system and control device to comply with the 95-percent control standard for HAP emissions must comply with this standard at all times. In other words, while vapor balancing fixed roof storage vessels during filling operations would control working loss emissions to at least the 95-percent control standard, owners or operators still have an obligation to control other emissions from these fixed roof storage vessels to 95-percent control, such as breathing losses and working losses that are not vapor balanced.

We are also proposing operating requirements for the vapor balancing system. We are proposing that vapor balancing systems be designed and operated to route vapors displaced from loading of the storage vessel to the transport vehicle (*i.e.*, railcar, tank truck, barge) from which the storage vessel is being loaded. For vapor balancing of pressure vessels, we are also proposing the transport vehicle may then be depressurized by sending the vapors to the process. We also propose that fluid transfer from a transport vehicle to a storage vessel must be performed only when the transport vehicle's vapor collection system is connected to the storage vessel vapor balancing system. We are proposing a definition of vapor balancing system at 40 CFR 63.12005 to mean a piping system that collects HAP vapors displaced from transport vehicles (*i.e.*, railcar, tank truck, barge) during storage vessel loading and routes the collected vapors to the storage vessel from which the HAP being loaded originated or to another storage vessel connected to a common header; or a piping system that collects HAP vapors displaced from the loading of a storage vessel and routes the collected vapors to the transport vehicle from which the storage vessel is filled.

In addition, we are proposing monitoring requirements for equipment on the vapor balancing system. We are proposing that each PRD on a storage vessel, transport vehicle, and vapor return line must remain closed while the storage vessel is being filled and each PRD must be in compliance with the rule's existing PRD monitoring requirements at 40 CFR 63.11915(c) (see section III.F of this preamble for details on clarifications we are proposing for the rule's existing PRD monitoring requirements). PVC production facilities commonly use vapor balancing to unload vinyl chloride into pressure vessels, and as such, we are also proposing the vapor balancing system must operate with no detectable emissions, which is consistent with the proposed pressure vessel requirements at 40 CFR 63.11910(c)(3) (see section III.D.1 of this

preamble). To confirm there are no detectable emissions, we are proposing that the affected source must conduct annual monitoring of each potential leak interface and each point on the vapor balancing system through which HAP could potentially be emitted, using the procedures specified in 40 CFR 63.1023(b) and (c).

We are also proposing certification and control requirements for transport vehicles. Prior to unloading into a storage vessel, we are proposing that vapor balancing systems be designed and operated to route vapors displaced from filling of the storage vessel to the transport vehicle (*i.e.*, railcar, tank truck, barge) from which the storage vessel is being filled. We are proposing that tank trucks and railcars must have a current certification from the U.S. Department of Transportation and barges must have current certification of vapor-tightness. To ensure the HAP that is vapor balanced from the PVC storage vessel to the transport vehicle is not simply released to the air, we are also proposing control and certification requirements for reloading and cleaning of the transport vehicle (see 40 CFR 63.11910(e)(6) and (7)).

Finally, we are proposing recordkeeping requirements at 40 CFR 63.11990(b)(7) if the affected source chooses to use this vapor balancing option.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, the proposed vapor balancing requirements in 40 CFR 63.11910(e) and 40 CFR 63.11990(b)(7)). We note that these proposed vapor balancing requirements are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(5) and (19) because 40 CFR 63.11910 and 40 CFR 63.11990 are referenced in those requirements.

### 3. Fixed Roof and Floating Roof Storage Vessels

We are clarifying requirements for fixed roof storage vessels using closed vent systems and control devices that are being used to meet the 95-percent control standard for HAP

emissions. To improve readability, we are proposing to move the requirements for fixed roof storage vessels using a closed vent system and control device to a separate paragraph at 40 CFR 63.11910(d) and clarify the corresponding requirements in Table 3 to 40 CFR part 63, subpart HHHHHHHH. The 2012 final major and area source rules included the closed vent system and control device requirements as part of the fixed roof storage vessel requirements in 40 CFR 63.11910(a); however, our proposal to separate the closed vent system and control device requirements from the fixed roof storage vessel requirements provides clarity on what specific requirements apply when a storage vessel is using a closed vent system and control device versus the specific requirements that apply to a fixed roof storage vessel. In addition, instead of complying with the control device requirements for process vents, we are proposing that for each fixed roof storage vessel that vents to a closed vent system and control device, the affected source must develop a control device operating plan and operate the control device according to the plan. The proposed operating plan requirements are based on the requirements in 40 CFR part 60, subpart Kb (40 CFR 60.113b(c)), because 40 CFR part 60, subpart Kb, formed the basis of the underlying standard for fixed roof storage vessels that are routed to a closed vent system and control device. However, we are also proposing the option to allow the affected source to continue to comply with the control device requirements for process vents provided that the storage vessel is vented to a closed vent system and control device that is also used to comply with the process vent emission limits.

As an alternative for fixed roof storage vessels using a closed vent system and control device to comply with the 95-percent control standard for HAP emissions in Table 3 to 40 CFR part 63, subpart HHHHHHHH, we are proposing at 40 CFR 63.11910(d)(4) that fixed roof storage vessel emissions may be routed back to the process instead of a control device. The proposed

requirements at 40 CFR 63.11910(d)(4) include preparing a design evaluation to demonstrate certain conditions are met. PVC production facilities also use vapor balancing systems, and as discussed previously (see section III.D.2 of this preamble), we are proposing this as a compliance method.

Finally, to improve readability, we are proposing other miscellaneous revisions to the fixed roof storage vessel requirements at 40 CFR 63.11910(a) and the floating roof storage vessel requirements at 40 CFR 63.11910(b). These proposed edits serve to clarify the requirements and create consistency in the language, without changing the underlying standards.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, clarifications to the fixed roof and floating roof storage vessel requirements). We note that these proposed requirements are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(5) because 40 CFR 63.11910 is referenced in those requirements.

#### *E. Affected Source*

Petitioners maintain that it was not feasible to comment on the revised definitions of the affected source at 40 CFR 63.11140(b) and 40 CFR 63.11870(b). The EPA is granting reconsideration on this issue. Although we are not making any changes to the definitions of the affected source in the 2012 final major and area source rules, we request public comments on these definitions for the reasons set forth in the 2012 final rules (see section III.A of the 2012 final preamble, 77 FR 22850).

#### *F. Equipment Leaks*

Following the promulgation of the 2012 final major and area source rules, the Vinyl Institute requested several clarifications on the equipment leak provisions in 40 CFR 63.11915 in

a letter<sup>13</sup> dated April 5, 2013. The Vinyl Institute said the requirements in the 2012 final major and area source rules at 40 CFR 63.11915(a) are inconsistent with the EPA's conclusions discussed in the preamble to the 2012 final rules (77 FR 22848) because the rule text only references some of the requirements in 40 CFR part 63, subpart UU, despite the fact that the preamble to the 2012 final rules says that MACT (for equipment leaks at existing and new major sources) as well as GACT (for equipment leaks at existing and new area sources) is compliance with 40 CFR part 63, subpart UU, for all equipment in HAP service as defined in 40 CFR 63.12005. Specifically, the Vinyl Institute said that in referencing provisions of 40 CFR part 63, subpart UU, at 40 CFR 63.11915(a), the EPA excluded 40 CFR part 63, subpart UU, requirements for applicability (40 CFR 63.1019), and certain equipment, including: pumps in light liquid service (40 CFR 63.1026), agitators in gas and vapor service and in light liquid service (40 CFR 63.1028), and open-ended valves or lines (40 CFR 63.1033). Additionally, the Vinyl Institute said the compliance options at 40 CFR 63.11915(b) are confusing and sometimes circular in relationship to the requirements in 40 CFR part 63, subpart UU. In particular, the Vinyl Institute said the compliance options at 40 CFR 63.11915(b) allowing use of either double (dual) mechanical seals or sealless pumps to comply with 40 CFR part 63, subpart UU, are redundant to compliance options already allowed in 40 CFR 63.1026; therefore, the Vinyl Institute requested that the EPA remove this redundancy from 40 CFR 63.11915(b).

The EPA agrees with the Vinyl Institute that the requirements in the 2012 final major and area source rules at 40 CFR 63.11915(a) do not properly reflect the EPA's MACT and GACT conclusions discussed in the preamble to the 2012 final rules (77 FR 22848) regarding

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<sup>13</sup> Refer to the letter titled *Clarification on Certain Provisions in the National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymer Production ("PVC MACT")*, from the Vinyl Institute to Andrea Siefers, U.S. EPA, dated April 5, 2013, available in the docket for this rulemaking (see Docket Item No. EPA-HQ-OAR-2002-0037-0560).

compliance with 40 CFR part 63, subpart UU, for all equipment in HAP service as defined in 40 CFR 63.12005. Therefore, for consistency with the EPA's MACT and GACT conclusions discussed in the preamble to the 2012 final major and area source rules (77 FR 22848), we are proposing to revise 40 CFR 63.11915(a) to include the requirements from 40 CFR part 63, subpart UU, that are inadvertently missing from the 2012 final rules, including: applicability requirements (40 CFR 63.1019(a), and (c) through (f)), requirements for pumps in light liquid service (40 CFR 63.1026), requirements for agitators in gas and vapor service and in light liquid service (40 CFR 63.1028), and requirements for open-ended valves or lines (40 CFR 63.1033).

Also, we are proposing to remove all of the requirements in 40 CFR 63.11915(b) because we have determined that these requirements were inadvertently published in the 2012 final major and area source rules in error. We agree with the Vinyl Institute that the requirements in 40 CFR 63.11915(b) are confusing, and sometimes redundant or circular, in relationship to the requirements in 40 CFR part 63, subpart UU. In fact, the preamble to the 2012 final major and area source rules (77 FR 22848) makes it clear that the "proposed requirement (at 40 CFR 63.11915(b)) that reciprocating pumps, reciprocating and rotating compressors and agitators be equipped with double seals, or equivalent, was in error. In the final rules, we have adopted the MACT floor level of control for equipment leaks for all components (which is compliance with 40 CFR part 63, subpart UU), which gives affected sources the option of installing double seals, or equivalent, or complying with the LDAR requirements of the equipment leak standards."

In addition, in a letter<sup>14</sup> dated May 27, 2020, the Vinyl Institute requested that the EPA clarify whether the 2012 final major and area source rules require a release indicator to be installed directly on each PRD. More specifically, the Vinyl Institute requested that the EPA

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<sup>14</sup> Refer to the letter titled *RE: Description of Pressure Relief Device Monitoring Practices for PVC Facilities*, from the Vinyl Institute to Jennifer Caparoso, U.S. EPA, dated May 27, 2020, available in the docket for this rulemaking.

revise 40 CFR 63.11915(c)(1)(i) to allow the installation of a release indicator in series with the PRD or in combination with other sensors and monitoring systems in series with the PRD (in lieu of requiring a release indicator be installed directly on each PRD). The Vinyl Institute argued that it is not necessary for the release indicator to be installed “directly” on the PRD in order to determine whether an emission release has occurred. The Vinyl Institute said facilities use a variety of sensor combinations and/or monitoring systems (that are not always installed “directly” on the PRD, but rather in series with the PRD) in order to determine whether an emission release from a PRD has occurred.

It was not our intent to require only direct installation of a release indicator on the PRD. Therefore, we are proposing to revise 40 CFR 63.11915(c) to clarify the PRD requirements that are beyond those required in 40 CFR part 63, subpart UU; and to clarify that a release indicator may either be installed on each PRD or installed on the associated process or piping system in such a way that it will indicate when an emission release has occurred. We are proposing that the release indicator device or system can include, but is not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor. We are also clarifying in 40 CFR 63.11915(c)(1)(i) that the vinyl chloride monitoring system required in 40 CFR 63.11956 is not considered a release indicator for purposes of complying with 40 CFR 63.11915(c)(1)(i).

Also, although 40 CFR part 63, subpart UU, references the closed vent system requirements in 40 CFR part 63, subpart SS, we are proposing at 40 CFR 63.11915(d) that if the affected source routes emissions from equipment in HAP service through a closed vent system to a control device, or back into the process or a fuel gas system, then the affected source must comply with 40 CFR 63.11930 in lieu of the closed vent system requirements specified in 40

CFR 63.983 of subpart SS, and the recordkeeping and reporting requirements associated with 40 CFR 63.983 of subpart SS do not apply. Alternatively, we are proposing an option that allows the affected source to comply with the control device and closed vent system requirements for process vents, provided that the emissions from equipment are vented to the same closed vent system and control device that is also used to comply with the process vent emission limits. This proposed change streamlines all closed vent system requirements within the rule by preventing an owner or operator from having to comply with more than one set of closed vent system requirements (*e.g.*, the current rule requires owners or operators of equipment to comply with the closed vent system requirements at 40 CFR 63.983 pursuant to 40 CFR 63.1034, yet owners or operators of a process vent must comply with the closed vent system requirements at 40 CFR 63.11930). Also, this proposed change (*i.e.*, to comply with 40 CFR 63.11930 for affected sources that route emissions from equipment in HAP service through a closed vent system to a control device, or back into the process or a fuel gas system) would not allow the affected source to bypass the air pollution control device at any time, and if a bypass is used, then the affected source would be required to estimate and report the quantity of vinyl chloride and total HAP released (see 40 CFR 63.11930(c) and 40 CFR 63.11985(b)(10), respectively). We are proposing this change because bypassing an air pollution control device could result in a release of regulated HAP to the atmosphere and to be consistent with *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), where the court determined that standards under CAA section 112(d) must provide for compliance at all times. We are also proposing at 40 CFR 63.11930(c) that any open-ended valve or line in the closed vent system that is equipped with a cap, blind flange, plug, or second valve which operates to seal the line at all times is not subject to the bypass requirements.

Finally, we are proposing at 40 CFR 63.11915(e) to make references that are related to startup, shutdown, and malfunction (SSM) exemptions for equipment leak requirements in 40 CFR part 63, subparts SS and UU, no longer applicable. Consistent with *Sierra Club v. EPA*, we are proposing standards in this rule that apply at all times. In its 2008 decision in *Sierra Club v. EPA*, 551 F.3d 1019 (D.C. Cir. 2008), the court vacated portions of two provisions in the EPA's CAA section 112 regulations governing the emissions of HAP during periods of SSM. Specifically, the court vacated the SSM exemptions contained in 40 CFR 63.6(f)(1) and (h)(1), holding that under section 302(k) of the CAA, emissions standards or limitations must be continuous in nature and that the SSM exemptions violate the CAA's requirement that CAA section 112 standards apply continuously.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, proposed changes to the equipment leak requirements in 40 CFR 63.11915). We note that all of these proposed changes are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(6) because 40 CFR 63.11915 is referenced in those requirements. Given that owners and operators are already complying with the control device and closed vent system requirements for process vents, we estimate that there would be no impact on any facility for making these changes. In other words, if the affected source chooses to route emissions from equipment in HAP service through a closed vent system to a control device (to comply with the equipment leak standards), we believe the affected source is likely to use the same existing closed vent system and control device being used to comply with the process vent standards.

#### *G. Closed Vent Systems*

We are proposing amendments to the closed vent system requirements in 40 CFR 63.11930 that clarify applicability. The requirement at 40 CFR 63.11930(a) is misleading

because it states that the closed vent system requirements in 40 CFR 63.11930 are exclusively for closed vent systems used to route emissions from process vents; however, as specified elsewhere in the 2012 final major and area source rules, closed vent systems used to route emissions from other sources (*e.g.*, stripped resin, process wastewater, storage vessels) are also subject to the closed vent system requirements in 40 CFR 63.11930. Therefore, we are proposing to clarify 40 CFR 63.11930(a) to specify that if the affected source uses a closed vent system to comply with an emission limit in Table 1 or 2 to 40 CFR part 63, subpart DDDDDDD, or an emission limit in Table 1, 1b, 2, 2b, or 3 to 40 CFR part 63, subpart HHHHHHHH, or to comply with the requirements in 40 CFR 63.11910, 40 CFR 63.11915, or 40 CFR 63.11955, then the affected source must comply with the closed vent system requirements in 40 CFR 63.11930. In other words, our proposal makes clear that if a closed vent system is being used to comply with any of the PVC production standards (*i.e.*, the process vent, stripped resin, process wastewater, storage vessel, equipment leak, or other emission source standards in 40 CFR part 63, subpart DDDDDDD or HHHHHHHH), then 40 CFR 63.11930 applies. For the same reasons, we are also proposing to amend 40 CFR 63.11930(b) (*i.e.*, the requirement that each closed vent system be designed and operated to collect HAP vapors and route the collected vapors to a control device) applies to all emission sources that route emissions through a closed vent system to a control device, a fuel gas system, or process.

The EPA is soliciting comment on all of the proposed changes discussed in this section of the preamble (*i.e.*, proposed changes to the closed vent system requirements in 40 CFR 63.11930). We note that all of these proposed changes are also being proposed for the 2012 area source rule at 40 CFR 63.11142(f)(9) because 40 CFR 63.11930 is referenced in those requirements. Given that owners and operators are already complying with 40 CFR 63.11930 for

emissions sources other than process vents (*e.g.*, stripped resin, process wastewater, and storage tanks), we estimate that there would be no impact on any facility for making this change.

#### *H. Affirmative Defense*

In the 2012 final major and area source rules, the EPA included an affirmative defense to civil penalties for violations caused by malfunctions (see 40 CFR 63.11895) in an effort to create a system that incorporated some flexibility, recognizing that there is a tension, inherent in many types of air regulation, to ensure adequate compliance while simultaneously recognizing that despite the most diligent of efforts, emission standards may be violated under circumstances entirely beyond the control of the source. Although the EPA recognized that its case-by-case enforcement discretion provides sufficient flexibility in these circumstances, it included the affirmative defense to provide a more formalized approach and more regulatory clarity. See *Weyerhaeuser Co. v. Costle*, 590 F.2d 1011, 1057-58 (D.C. Cir. 1978) (holding that an informal case-by-case enforcement discretion approach is adequate); but see *Marathon Oil Co. v. EPA*, 564 F.2d 1253, 1272-73 (9th Cir. 1977) (requiring a more formalized approach to consideration of “upsets beyond the control of the permit holder.”). Under the EPA’s regulatory affirmative defense provisions, if a source could demonstrate in a judicial or administrative proceeding that it had met the requirements of the affirmative defense in the regulation, civil penalties would not be assessed. However, the court vacated the affirmative defense in one of the EPA’s CAA section 112 regulations. *NRDC v. EPA*, 749 F.3d 1055 (D.C. Cir., 2014) (vacating affirmative defense provisions in the CAA section 112 rule establishing emission standards for Portland cement kilns). The court found that the EPA lacked authority to establish an affirmative defense for private civil suits and held that under the CAA, the authority to determine civil penalty amounts in such cases lies exclusively with the courts, not the EPA. Specifically, the court

found: “As the language of the statute makes clear, the courts determine, on a case-by-case basis, whether civil penalties are ‘appropriate.’” See *NRDC* at 1063 (“[U]nder this statute, deciding whether penalties are ‘appropriate’ in a given private civil suit is a job for the courts, not EPA.”).<sup>15</sup> In light of *NRDC*, the EPA is proposing to remove all of the regulatory affirmative defense provisions from 40 CFR part 63, subpart DDDDDDD (*i.e.*, the reference to “§63.11895” in 40 CFR 63.11142(f)(2)), and 40 CFR part 63, subpart HHHHHHHH (*i.e.*, 40 CFR 63.11895 in its entirety and all other rule text that references 40 CFR 63.11895). As explained above, if a source is unable to comply with emissions standards as a result of a malfunction, the EPA may use its case-by-case enforcement discretion to provide flexibility, as appropriate. Further, as the court recognized, in an EPA or citizen enforcement action, the court has the discretion to consider any defense raised and determine whether penalties are appropriate. *Cf. NRDC*, at 1064 (arguments that violation was caused by unavoidable technology failure can be made to the courts in future civil cases when the issue arises). The same is true for the presiding officer in EPA administrative enforcement actions.<sup>16</sup>

### *I. Other Technical Corrections and Clarifications*

There are a number of additional revisions that we are proposing to 40 CFR part 63, subpart DDDDDDD, and 40 CFR part 63, subpart HHHHHHHH, to clarify text and correct typographical errors, grammatical errors, and cross-reference errors; and we request public

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<sup>15</sup> The court’s reasoning in *NRDC* focuses on civil judicial actions. The court noted that “EPA’s ability to determine whether penalties should be assessed for CAA violations extends only to administrative penalties, not to civil penalties imposed by a court.” *Id.*

<sup>16</sup> Although the *NRDC* case does not address the EPA’s authority to establish an affirmative defense to penalties that are available in administrative enforcement actions, we are not including such an affirmative defense in the proposed rule. As explained above, such an affirmative defense is not necessary. Moreover, assessment of penalties for violations caused by malfunctions in administrative proceedings and judicial proceedings should be consistent. *Cf.* CAA section 113(e) (requiring both the Administrator and the court to take specified criteria into account when assessing penalties).

comment on these revisions. These proposed editorial corrections and clarifications are summarized in Table 6 of this preamble. We note that although these proposed changes are being made directly in the major source rule, many of these proposed changes also result in revisions to the area source rule because 40 CFR part 63, subpart DDDDDD, references provisions in 40 CFR part 63, subpart HHHHHHHH.

TABLE 6. SUMMARY OF PROPOSED EDITORIAL AND MINOR CORRECTIONS TO 40 CFR PART 63, SUBPART DDDDDD AND 40 CFR PART 63, SUBPART HHHHHHHH

40 CFR part 63, subpart HHHHHHHH Provision	Proposed Revision	40 CFR part 63, subpart DDDDDD Provision <sup>1</sup>
Not applicable	Replace “are considered an existing affected source” with “must comply with paragraphs (b)(3)(i) and (ii) of this section” to clarify requirements.	40 CFR 63.11140(b)(3)
40 CFR 63.11872	Revise heading to “What is the relationship to other regulations?” to clarify content of 40 CFR 63.11872.  Clarify that 40 CFR part 63, subpart J, does not apply to any source that is subject to the requirements of this subpart. 40 CFR part 63, subpart J, was vacated by court action.	Not applicable
40 CFR 63.11896(b)	Revise first sentence to be consistent with the same phrasing used in 40 CFR 63.11896(a).	40 CFR 63.11142(f)(3)
40 CFR 63.11900(c)	Replace “the effective date of publication of the final rule in the <b>FEDERAL REGISTER</b> ” with “compliance date specified in §63.11875” to clarify compliance dates.	40 CFR 63.11142(f)(4)
40 CFR 63.11900(d)	Replace “startup date of the affected source or the effective date of publication of the final rule in the <b>FEDERAL REGISTER</b> , whichever is later,” with “compliance date specified in §63.11875” to clarify compliance dates.	40 CFR 63.11142(f)(4)
40 CFR 63.11920(a)(3)(iii)	Change “Appendix A” to “Appendix B” to correct typographical error.	40 CFR 63.11142(f)(7)

40 CFR 63.11920(g)	Replace “repair action level” with “delay of repair action level” in two instances to clarify the requirement.	40 CFR 63.11142(f)(7)
40 CFR 63.11920(h)(4)(ii)	Change the unit of measurement for “D <sub>delay</sub> ” from “days” to “hours” to correct typographical error.	40 CFR 63.11142(f)(7)
40 CFR 63.11925(b)	Replace “Each batch process vent, continuous process vent and miscellaneous vent,” with “Each process vent as defined in §63.12005,” to clarify the requirement applies to all process vents.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(c)(1)	Remove the phrase “upon promulgation of a performance specification for hydrogen chloride CEMS,” because performance specification for hydrogen chloride continuous emission monitoring systems (CEMS) has been promulgated at 40 CFR part 60, appendix B, performance specification 18.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(d)(2) and (3), and (e)(2)	Replace “For each CEMS and CPMS required or that you elect...” with “For each CPMS required or CEMS that you elect...” to clarify CEMS is an option.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(e)(2)	Refer to 40 CFR 63.11935 in its entirety instead of only paragraphs (b) and (c) to correct typographical error.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(f)	Add “Toxic equivalency limit” to clarify title of paragraph.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(g)	Remove “continuous process vent, miscellaneous vent and batch” to clarify the requirement applies to all process vents.	40 CFR 63.11142(f)(8)
40 CFR 63.11925(g)(2)(iii)(B)(2)(ii)	Remove “(CHAP)” to correct typographical error and clarify vinyl chloride is excluded for purposes of compliance with the paragraph.	40 CFR 63.11142(f)(8)
40 CFR 63.11935(b)(5)	Remove the sentence “CEMS must record data at least once every 15 minutes.” because it is redundant	40 CFR 63.11142(f)(10)

	with the requirement in 40 CFR 63.11935(b)(2).	
40 CFR 63.11935(b)(6)(i)	Clarify the promulgated performance specification for HCl CEMS is 40 CFR part 60, appendix B, performance specification 18 as well as requirements of 40 CFR part 60, appendix F, procedure 6.	40 CFR 63.11142(f)(10)
40 CFR 63.11935(b)(7)(i)	Replace “continuous emissions monitoring system” with the proper acronym “CEMS.”	40 CFR 63.11142(f)(10)
40 CFR 63.11935(b)(7)(ii)	Replace “continuous emissions monitoring system” with the proper acronym “CEMS.”	40 CFR 63.11142(f)(10)
40 CFR 63.11935(d)(2)(iii)	Replace “of” with “explaining” to clarify requirement.	40 CFR 63.11142(f)(10)
40 CFR 63.11935(d)(3)	Replace “of” with “explaining” to clarify requirement.	40 CFR 63.11142(f)(10)
40 CFR 63.11940(b)(3)(ii)	<p>Replace “problems” with “any of the aforementioned conditions” to clarify requirement.</p> <p>Replace first instance of “like or better kind and quality as” with “like type or manufacturer as the old catalyst or is not as efficient as” to clarify requirement.</p> <p>Replace second instance of “like or better kind and quality as” with “like type or manufacturer as the old catalyst or is as efficient as or more efficient than” to clarify requirement.</p>	40 CFR 63.11142(f)(11)
40 CFR 63.11940(c)(2)(ii)	Add “(100.4 degrees Fahrenheit)” to clarify conversion of degrees Celsius in degrees Fahrenheit.	40 CFR 63.11142(f)(11)
40 CFR 63.11940(d)(1)	Include “and,” and replace “mass” with “mass flow” in first sentence to clarify requirement and remove the last sentence because it is redundant with the first sentence.	40 CFR 63.11142(f)(11)
40 CFR 63.11945(b)	Add requirement to record the process information that is necessary to document operating conditions during the test.	40 CFR 63.11142(f)(12)

40 CFR 63.11955(d)(1)	Clarify that each gasholder must be vented back into the process for reuse or routed to a closed vent system and control device meeting the requirements of 40 CFR 63.11925 through 63.11950. Most gasholders return recovered gas back to an enclosed process for reuse in the manufacturing process.	40 CFR 63.11142(f)(14)
40 CFR 63.11980(a)(1)	Replace “maximum operating conditions” with “maximum representative operating conditions” to correct typographical error.	40 CFR 63.11142(f)(17)
40 CFR 63.11985(b)(6)	Revise reference from 40 CFR 63.11990(j) to 40 CFR 63.11990(j)(2).	40 CFR 63.11142(f)(18)
40 CFR 63.11985(b)(8)(ii)	Remove entire requirement to correct typographical error.	40 CFR 63.11142(f)(18)
40 CFR 63.11985(b)(10)	Remove “but” to correct typographical error.  Change “§63.11910(c)(4)” to “§63.11910(c)(3)” to correct typographical error.	40 CFR 63.11142(f)(18)
40 CFR 63.11985(c)(1)	Add “storage vessel” to clarify the type of equipment inspection that a delegated agency may waive the requirement for notifications.	40 CFR 63.11142(f)(18)
40 CFR 63.11985(c)(8)	Add comma to correct typographical error.	40 CFR 63.11142(f)(18)
40 CFR 63.11985(c)(9)(i) and (ii)	Replace entire paragraphs with standardized performance test reporting language.	40 CFR 63.11142(f)(18)
40 CFR 63.11990(i)(5)	Remove entire requirement to correct typographical error.	40 CFR 63.11142(f)(19)
40 CFR 63.12005	Remove definition of “Container,” “Corrective action plan,” “Operating day,” “Root cause analysis,” “Solution process,” and “Unloading operations” because the terms are not used in the rule.	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Batch process vent” and “Continuous process vent” to add “be” between “to” and “routed” to correct typographical error.	40 CFR 63.11144(b)

40 CFR 63.12005	<p>Revise definition of “Dispersion process” to mean a process for producing polyvinyl chloride resin using either emulsion or microsuspension. Emulsion polymerization uses water soluble initiators and is distinguished by metering in surfactants as the reaction progresses. In microsuspension polymerization, homogenizers are first mixed with a monomer outside of the polymerization reactor and oil soluble initiators are then added before charging the reactor. These two polymerization techniques produce fine particles, typically less than 10 microns, with little or no porosity. Emulsifier levels vary but agitation is very mild compared to other PVC polymerization processes. The final product is dried to powder form.</p> <p>This change is being proposed to keep “dispersion” as a broad subcategory, as some facilities make resins using both types of processes.</p>	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “First attempt at repair” to clarify that monitoring as specified in §63.1023(b) and (c) may be applicable.	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Polyvinyl chloride and copolymers production process unit or PVCPU” to clarify that finished resin product is stored in a “vessel or storage silo” by removing the word “tank.”	.40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Polyvinyl chloride copolymer” to clarify that a copolymer is comprised of one or more monomers and also distinguishes these monomers from additives used for stabilization and/or particle size control. Also, remove the word “emulsion” and “solution”	40 CFR 63.11144(b)

	from the definition and clarify each process.	
40 CFR 63.12005	Revise definition of “Polyvinyl chloride homopolymer” to remove the word “emulsion” from the definition and clarify each process.	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Process component” to replace “units operations” with “unit operation” to correct typographical error.  Revise definition of “Process component” to clarify that “Process components include equipment, pressure vessels, process condensers, process tanks, recovery devices, and resin strippers, as defined in this section.”	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Process condenser” to clarify that can apply to batch or continuous processes.	40 CFR 63.11144(b)
40 CFR 63.12005	Revise definition of “Product” to mean a polymer produced using vinyl chloride monomer and varying in additives ( <i>e.g.</i> , initiators, terminators, etc.); catalysts; or in the relative proportions of vinyl chloride monomer with one or more other monomers, and that is manufactured by a process unit. With respect to polymers, more than one recipe may be used to produce the same product, and there can be more than one grade of a product. Product also means a chemical that is not a polymer, which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.  This change is being proposed to be consistent with the definitions of “Polyvinyl chloride copolymer” and “Polyvinyl chloride homopolymer”.	40 CFR 63.11144(b)

40 CFR 63.12005	Revise definition of “Repaired” to clarify that inspections from another subpart may be applicable.	40 CFR 63.11144(b)
40 CFR 63.12005	Remove the word “emulsion” and “solution processes” from the definition of “Type of resin” because the term is not used in the rule.	40 CFR 63.11144(b)
Table 5	Revise flow to/from the control device of any control device to replace “Flow to/from the control device” to “Presence or absence of flow to/for the control device if flow could be intermittent,” “N/A” with “Indication of absence of flow – note that absence of flow can be determined when process is not operating using simulated flow”, “Continuous” with “Episodic,” “N/A” to “Date and time when flow stops during process operation and when flow begins after stopping during process operation,” and “Date and time of flow start and stop” to “Time period between flow stop and start” to clarify what operating limit to establish during the initial performance test, minimum data recording frequency, and data averaging period for compliance, respectively.	40 CFR 63.11142(f)(2), (8), (10), and (18)
Table 5	Revise regeneration stream flow to regenerative adsorber to replace “N/A” with “Every 15 minutes” to clarify minimum data recording frequency.	40 CFR 63.11142(f)(2), (8), (10), and (18)
Table 5	Revise adsorber bed temperature, minimum temperature of regenerative adsorber to replace “N/A” with “Every 15 minutes during regeneration cycle” to clarify minimum data recording frequency.	40 CFR 63.11142(f)(2), (8), (10), and (18)
Table 5	Replace “vacuum and duratio of regeneration” with “vacuum and duration of regeneration” to correct typographical error.	40 CFR 63.11142(f)(2), (8), (10), and (18)

	Revise vacuum and duration of regeneration of regenerative adsorber to replace “N/A” with “Every 15 minutes during regeneration cycle” to clarify minimum data recording frequency.	
Table 5	Revise regeneration frequency of regenerative adsorber to replace “N/A” with “Date and time of regeneration start and stop” to clarify minimum data recording frequency.	40 CFR 63.11144(f)(2), (8), (10), and (18)
Table 5	Revise adsorber operation valve sequencing and cycle time of regenerative adsorber to replace “N/A” with “Daily” to clarify data averaging period for compliance.	40 CFR 63.11142(f)(2), (8), (10), and (18)
Table 5	Revise average adsorber bed life of non-regenerative adsorber to replace “N/A” with “Adsorber bed change-out time [N/A for initial performance test],” “N/A” with “Outlet VOC concentration,” and “N/A” with “Average time for three adsorber bed change-outs” to clarify what operating limit to establish, minimum data recording frequency, and data averaging period for compliance, respectively. Replace “Daily until breakthrough for 3 adsorber bed change-outs” with “Daily until breakthrough for three adsorber bed change-outs” to correct typographical error.	40 CFR 63.11142(f)(2), (8), (10), and (18)
Table 5	Revise Outlet VOC concentration of the first adsorber bed in series of non-regenerative adsorber to replace “N/A” with “Outlet VOC concentration” to clarify data recording frequency.	40 CFR 63.11142(f)(2), (8), (10), and (18)

<sup>1</sup> Several of the proposed revisions described in this table for 40 CFR part 63, subpart HHHHHHHH, are also being proposed for 40 CFR part 63, subpart DDDDDD, because the 40 CFR part 63, subpart HHHHHHHH provision, is referenced in the 40 CFR part 63, subpart DDDDDD provision, identified in this column.

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

We estimate that the proposed amendments will result in HAP emissions reductions of 34 tpy with an overall total capital savings of \$0.033 million and an associated total annualized cost of \$0.39 million. These estimated emission reductions as well as the increase in annualized costs are a result of the proposed revisions to emission limits in the 2012 major source rule for process vents and process wastewater (there is additional operations and maintenance costs of the control equipment and steam strippers that are related to the proposed emission limits). The estimated cost savings are a result of our proposal to eliminate the process wastewater TOHAP emission limit in the 2012 major source rule (there is a decrease in initial and annual costs of testing and monitoring). The details of the cost analyses and emissions reductions estimates are provided in the memorandum, *Technical Analysis and Documentation to Support EPA's Reconsideration of 40 CFR Part 63 Subpart HHHHHHH National Emission Standards for the Polyvinyl Chloride and Copolymers (PVC) Production Source Category*, which is available in the docket for this rulemaking. Estimates of the economic impacts for the proposal are estimated in terms of the annualized cost of compliance as a percent of the revenues for the six ultimate parent owners of the 14 facilities expected to incur impacts as a result of this proposal. No ultimate parent owner is expected to incur annualized cost of compliance of more than 0.003 percent of their revenues. The median cost to revenue impact is about 0.001 percent. One ultimate parent company is expected to experience a savings in compliance costs associated with the proposal. For more information on these economic impacts, refer to the *Economic Impact Analysis for the NESHAP for Polyvinyl Chloride and Copolymers Production: Reconsideration Proposal*, which is in the docket for this rulemaking.

## **V. 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 OMB for review.

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

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

*C. Paperwork Reduction Act (PRA)*

The information collection activities in these proposed rules have been submitted for approval to OMB under the PRA, as discussed for each rule covered by this action in sections V.C.1 and 2 of this preamble.

1. PVC Major Source NESHAP

The ICR document that the EPA prepared has been assigned EPA ICR number 2432.05. You can find a copy of the ICR in the docket for this rule (Docket ID No. EPA-HQ-OAR-2002-0037), and it is briefly summarized here.

The EPA is proposing amendments to 40 CFR part 63, subpart HHHHHHHH, to address petitions for reconsideration as described in section III of this preamble. This ICR documents the recordkeeping and reporting requirements and incremental burden imposed by the proposed amendments only. In summary, there is a decrease in the burden hours and cost in this ICR due to the elimination of wastewater TOHAP testing requirements that are associated with our proposed revisions to emission limits for process wastewater.

*Respondents/affected entities:* Owners or operators of PVC production major source facilities.

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

*Estimated number of respondents:* 14 (total).

*Frequency of response:* Semiannual and annual.

*Total estimated burden:* Reduction of 2,170 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* Savings of \$388,000 (per year), which includes a savings of \$134,000 annualized capital or operation and maintenance costs.

## 2. PVC Area Source NESHAP

The ICR document that the EPA prepared has been assigned EPA ICR number 2454.04. You can find a copy of the ICR in the docket for this rule (Docket ID No. EPA-HQ-OAR-2002-0037), and it is briefly summarized here.

The EPA is proposing amendments to 40 CFR part 63, subpart DDDDDD, to address petitions for reconsideration as described in section III of this preamble. This ICR documents the recordkeeping and reporting requirements and incremental burden imposed by the proposed amendments only. In summary, there is a decrease in the burden hours and cost in this ICR due to the elimination of wastewater TOHAP testing requirements that are associated with our proposed revisions to emission limits for process wastewater.

*Respondents/affected entities:* Owners or operators of PVC production area source facilities.

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

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

*Frequency of response:* Semiannual and annual.

*Total estimated burden:* Reduction of 340 hours (per year). Burden is defined at 5 CFR 1320.3(b).

*Total estimated cost:* Savings of \$61,000 (per year), which includes a savings of \$21,000 annualized capital or operation and maintenance costs.

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.

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

I certify that this action will not have a significant economic impact on a substantial number of small entities under the RFA. This action will not impose any requirements on small entities. There are no small entities among those affected by this proposal.

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

This action does not contain an unfunded mandate of \$100 million or more as described in UMRA, 2 U.S.C. 1531–1538, and does not significantly or uniquely affect small governments.

While this action creates an enforceable duty on the private sector, the annual cost does not exceed \$100 million or more.

*F. Executive Order 13132: Federalism*

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

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

This action does not have tribal implications as specified in Executive Order 13175. It will not have substantial new 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.

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

The EPA interprets Executive Order 13045 as applying to those regulatory actions that concern environmental health or safety risks that the EPA has reason to believe may disproportionately affect children, per the definition of “covered regulatory action” in section 2-202 of the Executive order. This action is not subject to Executive Order 13045 because it does not concern an environmental health risk or safety risk.

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

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

*J. National Technology Transfer and Advancement Act (NTTAA) and 1 CFR part 51*

This action does not involve any new technical standards from those contained in the 2012 final rules. Therefore, the EPA did not consider the use of any voluntary consensus standards.

The SW-846 methods included in § 63.11960 were previously approved for incorporation in that section and no changes are proposed.

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

The EPA believes that this action does not have disproportionately high and adverse human health or environmental effects on minority populations, low-income populations, and/or indigenous peoples, as specified in Executive Order 12898 (59 FR 7629, February 16, 1994).

The environmental justice finding in the 2012 final major and area source rules remains relevant in this action, which seeks comments on proposed amendments to 40 CFR part 63, subparts DDDDDD and HHHHHHH, that are mainly corrections to existing rule requirements and major source emission limits raised by stakeholders.

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

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

**Andrew Wheeler,**

*Administrator.*

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

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

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

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

**Subpart DDDDDD—National Emission Standards for Hazardous Air Pollutants for Polyvinyl Chloride and Copolymers Production Area Sources**

2. Section 63.11140 is amended by revising paragraphs (b)(2) introductory text, (b)(3) introductory text, and (c) to read as follows:

**§63.11140 Am I subject to this subpart?**

\* \* \* \* \*

(b) \* \* \*

(2) Except as specified in paragraph (b)(3) of this section, an affected source is new if you commenced construction, or reconstruction of the affected source between October 6, 2006, and May 20, 2011.

\* \* \* \* \*

(3) If you are a new affected source as specified in paragraph (b)(2) of this section that commenced construction or reconstruction between October 6, 2006, and May 20, 2011, then after April 17, 2012, you must comply with paragraphs (b)(3)(i) and (ii) of this section.

\* \* \* \* \*

(c) This subpart does not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

\* \* \* \* \*

3. Section 63.11141 is amended by adding paragraph (f) to read as follows:

**§63.11141 What are my compliance dates?**

\* \* \* \* \*

(f) All affected sources that commenced construction or reconstruction on or before May 20, 2011, must be in compliance with §63.11142(g) by [date 3 years after date of publication of final rule in the **Federal Register**]. All affected sources that commenced construction or reconstruction after May 20, 2011, must be in compliance with §63.11142(g) upon [date of publication of final rule in the **Federal Register**] or initial startup, whichever is later.

4. Section 63.11142 is amended by revising paragraphs (b), (f) introductory text, and (f)(2) and (9) and adding paragraph (g) to read as follows:

**§63.11142 What are the standards and compliance requirements for new and existing sources?**

\* \* \* \* \*

(b) Except as specified in paragraph (g) of this section, you must comply with each emission limit and standard specified in Table 1 to this subpart that applies to your existing affected source, and you must comply with each emission limit and standard specified in Table 2 to this subpart that applies to your new affected source.

\* \* \* \* \*

(f) You must meet the requirements of the applicable sections of subpart HHHHHHHH of this part, as specified in paragraphs (f)(1) through (19) of this section, except for the purposes of complying with this subpart, where the applicable sections of subpart HHHHHHHH of this part, as

specified in paragraphs (f)(1) through (19) of this section reference Table 1, 1b, 2, or 2b to subpart HHHHHHHH of this part, reference is made to Table 1 or Table 2 to this subpart.

\* \* \* \* \*

(2) You must comply with the requirements of §63.11890(a) through (d).

\* \* \* \* \*

(9) If you use a closed vent system to comply with paragraph (b) or (g) of this section, or to comply with the requirements in §63.11910, §63.11915, or §63.11955, then you must meet the requirements of §63.11930 for closed vent systems.

\* \* \* \* \*

(g) Beginning no later than the compliance dates specified in §63.11141(f), the emission limits for PVC-combined process vents in Tables 1 and 2 to this subpart no longer apply; instead, you must comply with the emission limits for PVC-combined process vents in Tables 1b and 2b to subpart HHHHHHHH of this part. At any time before the compliance dates specified in §63.11141(f), you may choose to comply with the emission limits for PVC-combined process vents in Tables 1b and 2b to subpart HHHHHHHH of this part in lieu of the emission limits for PVC-combined process vents in Tables 1 and 2 to this subpart.

5. Table 1 to subpart DDDDDD of part 63 is revised to read as follows:

TABLE 1 TO SUBPART DDDDDD OF PART 63—EMISSION LIMITS AND STANDARDS FOR EXISTING AFFECTED SOURCES

For this type of emission point . . .	And for this air pollutant . . .	And for an affected source producing this type of PVC resin . . .	You must meet this emission limit . . .
PVC process vents <sup>a</sup>	Vinyl chloride	All resin types	5.3 parts per million by volume (ppmv).
	Total hydrocarbons	All resin types	46 ppmv measured as propane.
	Total organic HAP <sup>b</sup>	All resin types	140 ppmv.

	Dioxins/furans (toxic equivalency basis)	All resin types	0.13 nanograms per dry standard cubic meter (ng/dscm).
PVC-combined process vents <sup>a,c</sup>	Vinyl chloride	All resin types	0.56 ppmv.
	Total hydrocarbons	All resin types	2.3 ppmv measured as propane.
	Total organic HAP <sup>b</sup>	All resin types	29 ppmv.
	Dioxins/furans (toxic equivalency basis)	All resin types	0.076 ng/dscm.
Stripped resin	Vinyl chloride	Bulk resin	7.1 parts per million by weight (ppmw); or 0.0071 grams per kilogram of product resin, dry basis (g/kg).
		Dispersion resin	1,500 ppmw; or 1.5 g/kg.
		Suspension resin	36 ppmw; or 0.036 g/kg.
		Suspension blending resin	140 ppmw; or 0.14 g/kg.
		Copolymer resin	790 ppmw; or 0.79 g/kg.
	Total non-vinyl chloride organic HAP	Bulk resin	170 ppmw; or 0.17 g/kg.
		Dispersion resin	320 ppmw; or 0.32 g/kg.
		Suspension resin	36 ppmw; or 0.036 g/kg.
		Suspension blending resin	500 ppmw; or 0.50 g/kg.
		Copolymer resin	1,900 ppmw; or 1.9 g/kg.
Process Wastewater	Vinyl chloride	All resin types	2.1 ppmw.

<sup>a</sup>Emission limits at 3-percent oxygen, dry basis.

<sup>b</sup>Affected sources have the option to comply with either the total hydrocarbon limit or the total organic HAP limit.

<sup>c</sup>Beginning on the date specified in §63.11141(f), these limits no longer apply; instead as specified in §63.11142(g), the limits in Table 1b to subpart HHHHHHH of this part apply.

6. Table 2 to subpart DDDDDD of part 63 is revised to read as follows:

TABLE 2 TO SUBPART DDDDDD OF PART 63—EMISSION LIMITS AND STANDARDS FOR NEW AFFECTED SOURCES

For this type of emission point . . .	And for this air pollutant . . .	And for an affected source producing this type of PVC resin . . .	You must meet this emission limit . . .
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PVC process vents <sup>a</sup>	Vinyl chloride	All resin types	5.3 parts per million by volume (ppmv).	
	Total hydrocarbons	All resin types	46 ppmv measured as propane.	
	Total organic HAP <sup>b</sup>	All resin types	140 ppmv.	
	Dioxins/furans (toxic equivalency basis)	All resin types	0.13 nanograms per dry standard cubic meter (ng/dscm).	
PVC-combined process vents <sup>a,c</sup>	Vinyl chloride	All resin types	0.56 ppmv.	
	Total hydrocarbons	All resin types	2.3 ppmv measured as propane.	
	Total organic HAP <sup>b</sup>	All resin types	29 ppmv.	
	Dioxins/furans (toxic equivalency basis)	All resin types	0.076 ng/dscm.	
Stripped resin	Vinyl chloride	Bulk resin	7.1 parts per million by weight (ppmw); or 0.0071 grams per kilogram of product resin, dry basis (g/kg).	
		Dispersion resin	1,500 ppmw, or 1.5 g/kg.	
		Suspension resin	36 ppmw; or 0.036 g/kg.	
		Suspension blending resin	140 ppmw; or 0.14 g/kg.	
		Copolymer resin	790 ppmw; or 0.79 g/kg.	
		Total non-vinyl chloride organic HAP	Bulk resin	170 ppmw; or 0.17 g/kg.
			Dispersion resin	320 ppmw; or 0.32 g/kg.
			Suspension resin	36 ppmw; or 0.036 g/kg.
			Suspension blending resin	500 ppmw; or 0.50 g/kg.
			Copolymer resin	1,900 ppmw; or 1.9 g/kg.
Process Wastewater	Vinyl chloride	All resin types	2.1 ppmw.	

<sup>a</sup>Emission limits at 3 percent oxygen, dry basis.

<sup>b</sup>Affected sources have the option to comply with either the total hydrocarbon limit or the total organic HAP limit.

<sup>c</sup>Beginning on the date specified in §63.11141(f), these limits no longer apply; instead as specified in §63.11142(g), the limits in Table 2b to subpart HHHHHHH of this part apply.

## **Subpart HHHHHHH—National Emission Standards for Hazardous Air Pollutant**

### **Emissions for Polyvinyl Chloride and Copolymers Production**

7. Section 63.11865 is revised to read as follows:

**§63.11865 Am I subject to the requirements in this subpart?**

You are subject to the requirements in this subpart if you own or operate one or more polyvinyl chloride and copolymers production process units (PVCPU) as defined in §63.12005 that are located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in §63.2. The requirements of this subpart do not apply to research and development facilities, as defined in section 112(c)(7) of the Clean Air Act.

8. Section 63.11872 is revised to read as follows:

**§63.11872 What is the relationship to other regulations?**

After the applicable compliance date specified in §63.11875(a), (b), or (c), an affected source that is also subject to the provisions of other subparts in 40 CFR part 60 or this part is required to comply with this subpart and any other applicable subparts in 40 CFR part 60 or this part, except subpart J of this part does not apply to any source that is subject to the requirements of this subpart.

9. Section 63.11875 is amended by adding paragraph (e) to read as follows:

**§63.11875 When must I comply with this subpart?**

\* \* \* \* \*

(e) All affected sources that commenced construction or reconstruction on or before May 20, 2011, must be in compliance with §63.11880(d) by [date 3 years after date of publication of final rule in the **Federal Register**]. All affected sources that commenced construction or reconstruction after May 20, 2011, must be in compliance with §63.11880(d) upon [date of publication of final rule in the **Federal Register**] or initial startup, whichever is later.

10. Section 63.11880 is amended by revising paragraph (a) and adding paragraph (d) to read as follows:

**§63.11880 What emission limits, operating limits and standards must I meet?**

(a) Except as specified in paragraph (d) of this section, you must comply with each emission limit and standard specified in Table 1 to this subpart that applies to your existing affected source, and you must comply with each emission limit and standard specified in Table 2 to this subpart that applies to your new affected source.

\* \* \* \* \*

(d) Beginning no later than the compliance dates specified in §63.11875(e), the emission limits specified in Tables 1 and 2 to this subpart no longer apply. Instead, you must comply with each emission limit and standard specified in Table 1b to this subpart that applies to your existing affected source, and you must comply with each emission limit and standard specified in Table 2b to this subpart that applies to your new affected source. At any time before the compliance dates specified in §63.11875(e), you may choose to comply with the emission limits in Tables 1b and 2b to this subpart in lieu of the emission limits in Tables 1 and 2 to this subpart.

11. Section 63.11890 is amended by revising paragraphs (d)(2) and (3) and (d)(5)(iv) to read as follows:

**§63.11890 What are my additional general requirements for complying with this subpart?**

\* \* \* \* \*

(d) \* \* \*

(2) When a performance test indicates that emissions of a pollutant in Table 1, 1b, 2, or 2b to this subpart are exceeding the emission standard for the pollutant specified in Table 1, 1b, 2, or 2b to this subpart.

(3) When a 3-hour block average from a continuous emissions monitor, as required by §63.11925(c)(1) through (3), exceeds an emission limit in Table 1, 1b, 2, or 2b to this subpart.

\* \* \* \* \*

(5) \* \* \*

(iv) A closure device and all other leaks on a pressure vessel.

\* \* \* \* \*

**§63.11895 [Removed and Reserved]**

12. Section 63.11895 is removed and reserved.

13. Section 63.11896 is amended by revising paragraphs (a) and (b) to read as follows:

**§63.11896 What am I required to do if I make a process change at my affected source?**

\* \* \* \* \*

(a) You must demonstrate that the changed process unit or component of the affected facility is in compliance with the applicable requirements for an existing affected source. You must demonstrate initial compliance with the emission limits and establish any applicable operating limits in §63.11880 within 180 days of the date of startup of the changed process unit or component of the affected facility. You must demonstrate compliance with any applicable work practice standards upon startup of the changed process unit or component of the affected facility.

(b) You must demonstrate that the changed process unit or component of the affected facility is in compliance with the applicable requirements for a new affected source. You must demonstrate initial compliance with the emission limits and establish any applicable operating limits in §63.11880 within 180 days of the date of startup of the changed process unit or component of the affected facility. You must demonstrate compliance with any applicable work practice standards upon startup of the changed process unit or component of the affected facility.

\* \* \* \* \*

14. Section 63.11900 is amended by revising paragraphs (a), (c), and (d) to read as follows:

**§63.11900 By what date must I conduct initial performance testing and monitoring, establish any applicable operating limits and demonstrate initial compliance with my emission limits and work practice standards?**

(a) For existing affected sources, you must establish any applicable operating limits required in §63.11880 and demonstrate initial compliance with the emission limits and standards specified in Table 1 or 1b to this subpart and Table 3 to this subpart, as applicable, no later than 180 days after the compliance date specified in §63.11875 and according to the applicable provisions in §63.7(a)(2).

\* \* \* \* \*

(c) For new or reconstructed affected sources, you must establish any applicable operating limits required in §63.11880, and demonstrate initial compliance with the emission limits and standards specified in Table 2 or 2b to this subpart and Table 3 to this subpart, as applicable, no later than 180 days after the compliance date specified in §63.11875 or within 180 days after startup of the source, whichever is later, according to §63.7(a)(2)(ix).

(d) For new and reconstructed affected sources, you must demonstrate initial compliance with any applicable work practice standards required in §63.11880 no later than the compliance date specified in §63.11875 and according to the applicable provisions in §63.7(a)(2).

\* \* \* \* \*

15. Section 63.11910 is amended by:

- a. Revising paragraphs (a) introductory text, (a)(1) heading, (a)(1)(ii), and (a)(2)(ii);
- b. Removing paragraph (a)(2)(iii);

- c. Revising paragraph (a)(3)(ii);
- d. Adding paragraph (a)(3)(iii);
- e. Revising paragraphs (b), (c) introductory text, and (c)(1), (3), and (4); and
- f. Adding paragraphs (d) and (e).

The revisions and additions read as follows:

**§63.11910 What are my initial and continuous compliance requirements for storage vessels?**

\* \* \* \* \*

(a) *Fixed roof storage vessels.* Except as specified in paragraph (d) of this section, for each fixed roof storage vessel used to comply with the requirements specified in Table 3 to this subpart, you must meet the requirements in paragraphs (a)(1) through (4) of this section.

(1) *Closure requirements.* \* \* \*

(ii) Each opening in the fixed roof must be equipped with a cover or other type of closure device designed to operate such that when the closure device is secured in the closed position there are no visible cracks, holes, gaps, or other open spaces in the closure device or between the perimeter of the opening and the closure device.

(2) \* \* \*

(ii) You may open closure devices or remove the fixed roof under the conditions specified in paragraphs (a)(2)(ii)(A) and (B) of this section.

(A) A closure device may be opened or the roof may be removed when needed to provide access for manual operations such as maintenance, inspection, sampling, or cleaning.

(B) Opening of a conservation vent or similar type of vent that vents to the atmosphere (or allows air to enter the storage vessel) is allowed during normal operating conditions to

maintain the tank internal operating pressure within tank design specifications. Normal operating conditions that may require these devices to open are during those times when the internal pressure of the storage vessel is outside the internal pressure operating range for the storage vessel as a result of loading or unloading operations or diurnal ambient temperature fluctuations.

(3) \* \* \*

(ii) If you determine parts of the roof are unsafe to inspect because operating personnel would be exposed to an imminent or potential danger as a consequence of such inspection, then the requirements specified in paragraph (a)(3)(i) of this section do not apply and you must comply with the requirements specified in paragraphs (a)(3)(ii)(A) and (B) of this section.

(A) You must prepare and maintain at the plant site written documentation that identifies all parts of the fixed roof and any closure devices that are unsafe to inspect and explains why such parts are unsafe to inspect.

(B) You must develop and implement a written plan and schedule to conduct inspections the next time alternative storage capacity becomes available and the storage vessel can be emptied or temporarily removed from service, as necessary, to complete the inspection. The required inspections must be performed as frequently as practicable, but do not need to be performed more than once per calendar year. Keep a copy of the written plan and schedule at the plant site, as specified in §63.11990(b).

(iii) Keep records of the date of each inspection, as required in paragraph (a)(3)(i) and (a)(3)(ii)(B) of this section. Provide notification of each inspection as specified in §63.11985(c)(1).

\* \* \* \* \*

(b) *Floating roof storage vessels.* For each floating roof storage vessel used to comply with the requirements specified in Table 3 to this subpart, you must meet all requirements of §§63.1060 through 63.1067 for internal floating roof storage vessels or external floating roof storage vessels, as applicable.

(c) *Pressure vessels.* For each pressure vessel used to comply with the requirements specified in Table 3 to this subpart, you must meet the requirements in paragraphs (c)(1) through (4) of this section.

(1) You must operate the pressure vessel as a closed system without emissions to the atmosphere. Vent streams sent to the process from pressure vessels, or purged from pressure vessels, must meet the requirements in paragraph (d)(4) of this section and §63.11925(a) and (b). You may also elect to vapor balance the pressure vessel during filling operations and comply with the requirements in paragraph (e) of this section.

\* \* \* \* \*

(3) The pressure vessel must be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, at all times. Any such release (*e.g.*, leak) constitutes a violation. You must conduct annual monitoring of each potential leak interface and each point on the pressure vessel through which HAP could potentially be emitted, using the procedures specified in §63.1023(b) and (c) and paragraphs (c)(3)(i) and (ii) of this section.

(i) When §63.1023(b)(5) refers to “when the equipment is in regulated material service or is in use with any other detectable material,” it means “when the pressure vessel is in HAP service” for the purposes of this section.

(ii) Section 63.1023(b)(6) does not apply for the purposes of this section.

(4) You must comply with the recordkeeping provisions specified in §63.11990(b)(4) and the reporting provisions specified in §63.11985(a)(1) and (b)(1) and (10).

(d) *Fixed roof storage vessels vented to a closed vent system and control device.* For each fixed roof storage vessel that vents to a closed vent system and control device to comply with the requirements specified in Table 3 to this subpart, you must meet the requirements in paragraphs (a)(1) and (3) and (d)(1) through (3) of this section. In lieu of complying with the requirements specified in paragraphs (d)(1) through (3) of this section, you may elect to route emissions back to the process and comply with the requirements in paragraph (d)(4) of this section. During filling operations, in lieu of complying with the requirements specified in paragraphs (d)(1) through (3) of this section, you may elect to vapor balance the storage vessel and comply with the requirements in paragraph (e) of this section.

(1) Except as specified in paragraph (d)(2) of this section, you must develop a control device operating plan containing the information listed in paragraphs (d)(1)(i) and (ii) of this section and meet the requirements specified in §63.11930. You must then operate the control device and monitor the parameters of the control device in accordance with the operating plan. You must not use a flare to comply with the 95 weight percent HAP reduction requirement in Table 3 to this subpart.

(i) The documentation demonstrating that the control device will achieve the required control efficiency during maximum loading conditions is to include a description of the gas stream which enters the control device, including flow and HAP content under varying liquid level conditions (dynamic and static) and manufacturer's design specifications for the control device. If the control device or the closed vent system receives vapors, gases, or liquids other than fuels from sources that are not fixed roof storage vessels, then the efficiency demonstration

is to include consideration of all vapors, gases, and liquids received by the closed vent capture system and control device. If an enclosed combustion device with a minimum residence time of 0.75 seconds and a minimum temperature of 816 degrees Celsius (1,501 degrees Fahrenheit) is used to meet the 95-percent requirement, documentation that those conditions will exist is sufficient to meet the requirements of this paragraph (d)(1)(i).

(ii) A description of the parameter or parameters to be monitored to ensure that the control device will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) If the storage vessel is vented to a closed vent system and control device that is also used to comply with the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart and you are meeting the requirements in §§63.11925 through 63.11950 for the closed vent system and control device, then you are not required to comply with the requirements specified in paragraph (d)(1) of this section.

(3) During periods of planned routine maintenance of a control device, operate the storage vessel in accordance with paragraphs (d)(3)(i) and (ii) of this section. You must keep the records specified in §63.11990(b)(6).

(i) Do not add material to the storage vessel during periods of planned routine maintenance.

(ii) Limit periods of planned routine maintenance for each control device to no more than 360 hours per year.

(4) If you route emissions from a storage vessel back to the process to comply with the requirements specified in Table 3 to this subpart, you must meet the requirements in paragraphs (d)(4)(i) through (iii) of this section.

(i) The HAP in the emissions must meet one or more of the conditions specified in paragraphs (d)(4)(i)(A) through (D) of this section.

(A) Recycled and/or consumed in the same manner as a material that fulfills the same function in that process;

(B) Transformed by chemical reaction into materials that are not HAP;

(C) Incorporated into a product; and/or

(D) Recovered.

(ii) To demonstrate compliance with paragraph (d)(4)(i) of this section, you must prepare a design evaluation (or engineering assessment) that demonstrates that one or more of the conditions specified in paragraphs (d)(4)(i)(A) through (D) of this section are being met.

(iii) You must comply with the requirements of §63.11930.

(e) *Vapor balancing*. For each storage vessel you elect to vapor balance during filling operations to comply with the requirements specified in Table 3 to this subpart, you must meet the requirements in paragraphs (e)(1) through (7) of this section.

(1) The vapor balancing system must be designed and operated to route HAP vapors displaced from loading of the storage vessel to the railcar, tank truck, or barge from which the storage vessel is filled without emissions to the atmosphere. You may depressurize the railcar, tank truck, or barge by sending the HAP vapors back to the process and meet the requirements of paragraphs (d)(4)(i) through (iii) of this section.

(2) Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation (DOT) qualification and maintenance requirements of 49 CFR part 180, subparts E (for cargo tanks) and F (for tank cars). Barges must have a current certification of vapor-tightness through testing in accordance with §63.565.

(3) HAP must only be unloaded from tank trucks, railcars, or barges when vapor collection systems are connected to the storage vessel's vapor collection system.

(4) Pressure relief devices on the storage vessel, railcar, tank truck, barge, and vapor return line must not open during storage vessel loading or as a result of diurnal temperature changes (breathing losses). You must comply with the requirements in §63.11915(c) for each pressure relief device.

(5) The vapor balancing system must be designed to operate with no detectable emissions, as indicated by an instrument reading of less than 500 ppm above background, at all times. Any such release (*e.g.*, leak) constitutes a violation of this rule. You must conduct annual monitoring of each potential leak interface and each point on the vapor balancing system through which HAP could potentially be emitted, using the procedures specified in §63.1023(b) and (c) and paragraphs (e)(5)(i) and (ii) of this section.

(i) When §63.1023(b)(5) refers to “when the equipment is in regulated material service or is in use with any other detectable material,” it means “when the vapor balancing system is in HAP service” for the purposes of this section.

(ii) Section 63.1023(b)(6) does not apply for the purposes of this section.

(6) Railcars, tank trucks, or barges that deliver HAP to a storage vessel must be reloaded or cleaned at a facility that utilizes one of the control techniques specified in paragraphs (e)(6)(i) through (iii) of this section.

(i) The railcar, tank truck, or barge must be connected to a closed vent system with a non-flare control device that reduces inlet emissions of HAP by 95 percent by weight or greater. Railcars, tank trucks, or barges that have materials with a maximum true vapor pressure greater than 11.1 psia must not use the option in this paragraph (e)(6)(i).

(ii) A vapor balancing system designed and operated to collect HAP vapor displaced from the tank truck, railcar, or barge during reloading must be used to route the collected HAP vapor to the storage vessel from which the liquid being transferred originated.

(iii) The railcar, tank truck, or barge must route its emissions back to the process.

(7) The owner or operator of the facility where the railcar, tank truck, or barge is reloaded or cleaned must comply with paragraphs (e)(7)(i) through (v) of this section.

(i) Submit to the owner or operator of the storage vessel and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of paragraphs (e)(7)(i) through (iv) of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the storage vessel giving at least 90 days' notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of paragraph (e)(7) of this section.

(ii) If complying with paragraph (e)(6)(i) of this section, comply with the requirements for closed vent systems and control devices specified in paragraph (d)(1) of this section. The notification and reporting requirements in §63.11985 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(iii) If complying with paragraph (e)(6)(ii) of this section, keep the records specified in §63.11990(b)(7)(ii).

(iv) If complying with paragraph (e)(6)(iii) of this section, comply with the requirements in paragraphs (d)(4)(i) and (iii) only and keep the records specified in §63.11990(b)(7)(iii).

(v) After the compliance dates specified in §63.11875 at an offsite reloading or cleaning facility subject to paragraph (e) of this section, compliance with the monitoring, recordkeeping, and reporting requirements of any other subpart of this part constitutes compliance with the

monitoring, recordkeeping, and reporting requirements of paragraphs (e)(7)(ii) through (iv) of this section. You must identify in your Notification of Compliance Status report required by §63.11985(a) the subpart to this part with which the owner or operator of the reloading or cleaning facility complies.

16. Section 63.11915 is revised to read as follows:

**§63.11915 What are my compliance requirements for equipment leaks?**

For equipment in HAP service (as defined in §63.12005), you must comply with the requirements in paragraphs (a) through (e) of this section.

(a) Except as specified in paragraphs (c) through (e) of this section, you must comply with §§63.1019(a) and (c) through (f) and 63.1020 through 63.1039.

(b) [Reserved]

(c) For pressure relief devices in HAP service, as defined in §63.12005, you must meet the requirements of this paragraph (c) in addition to the requirements specified in paragraph (a) of this section. You must also comply with the recordkeeping requirements in §63.11990(c) and the reporting requirements in §63.11985(a)(2), (b)(2), and (c)(7).

(1) For pressure relief devices in HAP service that discharge directly to the atmosphere without first meeting the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart by routing the discharge to a closed vent system and control device designed and operated in accordance with the requirements in §§63.11925 through 63.11950, you must install, maintain, and operate release indicators as specified in paragraphs (c)(1)(i) and (ii) of this section. Any release to the atmosphere without meeting the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart, constitutes a violation. You must submit the report specified in §63.11985(c)(7), as described in paragraph (c)(1)(iii) of this section.

(i) A release indicator must be properly installed on each pressure relief device or associated process or piping system in such a way that it will indicate when an emission release has occurred. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor. A release indicator does not include any monitoring system used to meet the requirements of §63.11956.

(ii) Each indicator must be equipped with an alert system that will notify an operator immediately and automatically when the pressure relief device is open. The alert must be located such that the signal is detected and recognized easily by an operator.

(iii) For any instance that the release indicator indicates that a pressure relief device is open, you must notify operators that a pressure release has occurred, and, within 10 days of the release, you must submit to the Administrator the report specified in §63.11985(c)(7).

(2) Pressure relief devices in HAP service that discharge directly to a closed vent system and control device designed and operated in accordance with the requirements in §§63.11925 through 63.11950, are required to meet process vent emission limits in Table 1, 1b, 2, or 2b to this subpart. Any release to the atmosphere without meeting the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart, constitutes a violation. You must notify operators that a pressure release has occurred, and, within 10 days of the release, you must submit to the Administrator the report specified in §63.11985(c)(7).

(d) If you route emissions from equipment in HAP service through a closed vent system to a control device, or back into the process or a fuel gas system, then you must comply with paragraph (d)(1) or (2) of this section.

(1) Comply with §63.1034, except you must comply with §63.11930 in lieu of the closed vent system requirements specified in §63.983, and the recordkeeping and reporting requirements associated with §63.983 do not apply.

(2) If emissions from equipment are vented to a closed vent system and control device that is also used to comply with the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart and you are meeting the requirements in §§63.11925 through 63.11950 for the closed vent system and control device, then you are not required to comply with the closed vent system and control device requirements specified in §63.1034.

(e) The referenced provisions specified in paragraphs (e)(1) through (6) of this section do not apply when demonstrating compliance with this section.

(1) The phrase “except during periods of start-up, shutdown and malfunction as specified in the referencing subpart” in §63.984(a)(1).

(2) Section 63.998(d)(3).

(3) The phrase “may be included as part of the startup, shutdown, and malfunction plan, as required by the referencing subpart for the source, or” from §63.1024(f)(4)(i).

(4) The phrase “(except periods of startup, shutdown, or malfunction)” from §63.1026(e)(1)(ii)(A).

(5) The phrase “(except during periods of startup, shutdown, or malfunction)” from §63.1028(e)(1)(i)(A).

(6) The phrase “(except during periods of startup, shutdown, or malfunction)” from §63.1031(b)(1).

17. Section 63.11920 is amended by revising paragraphs (a)(3)(iii) and (g) introductory text and revising parameter “ $D_{\text{delay}}$ ” of Equation 1 in paragraph (h)(4)(ii) to read as follows:

**§63.11920 What are my initial and continuous compliance requirements for heat exchange systems?**

(a) \* \* \*

(3) \* \* \*

(iii) Determine the vinyl chloride concentration (in parts per billion by weight) in the cooling water using Method 107 at 40 CFR part 61, appendix B.

\* \* \* \* \*

(g) The delay of repair action level is defined as either a total strippable volatile organic compounds concentration (as methane) in the stripping gas of 39 parts per million by volume or a total strippable volatile organic compounds concentration in the cooling water of 500 parts per billion by weight or a vinyl chloride concentration in the cooling water of 500 parts per billion by weight. While you remain below the delay of repair action level, you may delay the repair of a leaking heat exchanger only if one of the conditions in paragraph (g)(1) or (2) of this section is met. If you exceed the delay of repair action level you must repair according to paragraph (e) of this section. You must determine if a delay of repair is necessary as soon as practicable, but no later than 45 days after first identifying the leak.

\* \* \* \* \*

(h) \* \* \*

(4) \* \* \*

(ii) \* \* \*

$D_{\text{delay}}$  = Expected duration of the repair delay, hours.

18. Section 63.11925 is amended by revising paragraphs (a), (b), (c) introductory text, (c)(1), (d) introductory text, (d)(2) through (4), (d)(5) introductory text, (d)(5)(i), (e) introductory

text, (e)(2), (e)(3)(ii), (e)(4)(i), (e)(5), (f) introductory text, (g) introductory text, (g)(2)(iii)(B)(2)(ii), (g)(3), and (h) to read as follows:

**§63.11925 What are my initial and continuous compliance requirements for process vents?**

\* \* \* \* \*

(a) *Emission limits.* Each process vent must meet the emission limits in Table 1, 1b, 2, or 2b to this subpart prior to the vent stream being exposed to the atmosphere. The emission limits in Table 1, 1b, 2, or 2b to this subpart apply at all times. The emission limits in Table 1, 1b, 2, or 2b to this subpart must not be met through dilution. If an applicable process vent stream at a PVCPU is comingled with a vent stream from one or more non-PVCPU sources and the comingled streams are vented through a shared control device, then each emission standard (and subsequent control device, monitoring, recordkeeping, reporting, and other requirements) to which the comingled vent stream is subject applies.

(b) *Closed vent systems and control devices.* Each process vent as defined in §63.12005, that is in HAP service must be routed through a closed vent system to a control device. All gas streams routed to the closed vent system and control device must be for a process purpose and not for the purpose of diluting the process vent to meet the emission limits in Table 1, 1b, 2, or 2b to this subpart. Each control device used to comply with paragraph (a) of this section must meet the requirements of §§63.11925 and 63.11940, and all closed vent systems must meet the requirements in §63.11930. You must not use a flare to comply with the emission limits in Table 1, 1b, 2, or 2b to this subpart.

(c) *General monitoring requirements.* Except as provided in paragraphs (c)(1) through (3) of this section, for each control device used to comply with the process vent emission limit specified in Table 1, 1b, 2, or 2b to this subpart, you must install and operate a continuous

parameter monitoring system (CPMS) to monitor each operating parameter specified in §63.11940(a) through (h) to comply with your operating limit(s) required in §63.11880(b).

(1) Hydrogen chloride continuous emission monitoring system (CEMS). In lieu of establishing operating limits in §63.11880(b) and using CPMS to comply with the operating limits, as specified in §63.11940(a) through (h), new and existing sources have the option to install a hydrogen chloride CEMS to demonstrate initial and continuous compliance with the hydrogen chloride emission limit for process vents, as specified in paragraphs (d) and (e) of this section.

\* \* \* \* \*

(d) *Initial compliance.* To demonstrate initial compliance with the emission limits in Table 1, 1b, 2, or 2b to this subpart, you must comply with paragraphs (d)(1) through (5) of this section.

\* \* \* \* \*

(2) For each CPMS required, or CEMS that you elect to use as specified in paragraph (c) of this section, you must prepare the quality control program and site-specific performance evaluation test plan as specified in §63.11935(b) and site-specific monitoring plan specified in §63.11935(c), respectively.

(3) For each CPMS required, or CEMS that you elect to use as specified in paragraph (c) of this section, you must install, operate, and maintain the CEMS and CPMS as specified in §63.11935(b) and (c), respectively, and you must conduct an initial site-specific performance evaluation test according to your site-specific monitoring plan and §63.11935(b)(3) and (c)(4), respectively.

(4) For each emission limit for which you use a CEMS to demonstrate compliance, you must meet the requirements specified in §63.11890(c), and you must demonstrate initial compliance with the emission limits in Table 1, 1b, 2, or 2b to this subpart based on 3-hour block averages of CEMS data collected at the minimum frequency specified in §63.11935(b)(2) and calculated using the data reduction method specified in §63.11935(e). For a CEMS used on a batch operation, you may use a data averaging period based on an operating block in lieu of the 3-hour averaging period.

(5) For each emission limit in Table 1, 1b, 2, or 2b to this subpart for which you do not use a CEMS to demonstrate compliance, you must meet the requirements of paragraphs (d)(5)(i) and (ii) of this section.

(i) You must conduct an initial performance test according to the requirements in §63.11945 to demonstrate compliance with the total hydrocarbons or total organic HAP emission limit, vinyl chloride emission limit, hydrogen chloride emission limit, and dioxin/furan emission limit in Table 1, 1b, 2, or 2b to this subpart.

\* \* \* \* \*

(e) *Continuous compliance.* To demonstrate continuous compliance with the emission limits in Table 1, 1b, 2, or 2b to this subpart for each process vent, you must comply with paragraphs (e)(1) through (5) of this section.

\* \* \* \* \*

(2) You must operate and maintain each CPMS required, or CEMS that you elect to use in paragraph (c) of this section, as specified in §63.11935.

(3) \* \* \*

(ii) You must demonstrate continuous compliance with the emission limits in Table 1, 1b, 2, or 2b to this subpart based on 3-hour block averages of CEMS data collected at the minimum frequency specified in §63.11935(b)(2), and calculated using the data reduction method specified in §63.11935(e). You must meet the requirements specified in §63.11890(c). For a CEMS used on a batch operation, you may use a data averaging period based on an operating block in lieu of the 3-hour averaging period.

(4) \* \* \*

(i) You must conduct a performance test once every 5 years according to the requirements in §63.11945 for each pollutant in Table 1, 1b, 2, or 2b to this subpart.

\* \* \* \* \*

(5) Each closed vent system and control device used to comply with an emission limit in Table 1, 1b, 2, or 2b to this subpart must be operated at all times when emissions are vented to, or collected by, these systems or devices.

(f) *Toxic equivalency limit.* To demonstrate compliance with the dioxin/furan toxic equivalency emission limit specified in Table 1, 1b, 2, or 2b to this subpart, you must determine dioxin/furan toxic equivalency as specified in paragraphs (f)(1) through (3) of this section.

\* \* \* \* \*

(g) *Emission profile.* You must characterize each process vent by developing an emissions profile for each contributing process vent according to paragraphs (g)(1) through (3) of this section.

\* \* \* \* \*

(2) \* \* \*

(iii) \* \* \*

(B) \* \* \*

(2) \* \* \*

(ii) The total organic HAP concentration shall be computed according to Equation 1 of this section except that only the organic HAP species shall be summed. The list of organic HAP is provided in Table 2 to subpart F of this part, except vinyl chloride shall be excluded for purposes of compliance with this paragraph (g)(2)(iii)(B)(2)(ii).

\* \* \* \* \*

(3) For miscellaneous process vents, the emissions profile must be determined according to paragraph (g)(2)(iv) of this section.

(h) *Process changes*. Except for temporary shutdowns for maintenance activities, if you make a process change such that, as a result of that change, you are subject to a different process vent limit in Table 1, 1b, 2, or 2b to this subpart, then you must meet the requirements of §63.11896.

19. Section 63.11930 is amended by revising paragraphs (a), (b), (c) introductory text, (c)(1)(iv), (c)(2)(i), (c)(2)(ii)(A), and (h)(3) to read as follows:

**§63.11930 What requirements must I meet for closed vent systems?**

(a) *General*. If you use a closed vent system to comply with an emission limit in Table 1, 1b, 2, 2b, or 3 to this subpart, or to comply with the requirements in §63.11910, §63.11915, or §63.11955, then you must comply with the requirements in this section. However, if you operate and maintain your closed vent system in vacuum service as defined in §63.12005, you must meet the requirements in paragraph (h) of this section and are not required to meet the requirements in paragraphs (a) through (g) of this section.

(b) *Collection of emissions.* Each closed vent system must be designed and operated to collect HAP vapors and route the collected vapors to a control device, a fuel gas system, or process.

(c) *Bypass.* For each closed vent system that contains a bypass as defined in §63.12005 (e.g., diverting a vent stream away from the control device), you must not discharge to the atmosphere through the bypass. Any such release constitutes a violation. The use of any bypass diverted to the atmosphere during a performance test invalidates the performance test. You must comply with the provisions of either paragraph (c)(1) or (2) of this section for each closed vent system that contains a bypass that could divert a vent stream to the atmosphere. Any open-ended valve or line in the closed vent system that is equipped with a cap, blind flange, plug, or second valve and that operates to seal the open end at all times is not subject to either paragraph (c)(1) or (2) of this section.

(1) \* \* \*

(iv) For any instances where the flow indicator alarm is triggered, you must submit to the Administrator as part of your compliance report, the information specified in §63.11985(b)(9) and (10).

(2) \* \* \*

(i) You must visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the non-diverting position, and the vent stream is not diverted through the bypass. A broken seal or closure mechanism or a diverted valve constitutes a violation. You must maintain the records specified in paragraph (g)(1)(ii) of this section.

(ii) \* \* \*

(A) For each instance that you change the bypass valve to the diverting position, you must submit to the Administrator as part of your compliance report, the information specified in §63.11985(b)(9) and (10).

\* \* \* \* \*

(h) \* \* \*

(3) *In vacuum service alarm records and reports.* For any incidences where a closed vent system designed to be in vacuum service is not in vacuum service, you must submit to the Administrator as part of your compliance report, the information specified in §63.11985(b)(10).

20. Section 63.11935 is amended by revising paragraphs (a), (b)(5), (b)(6)(i), (b)(7)(i) and (ii), (d) introductory text, (d)(1), (d)(2)(iii), and (d)(3) to read as follows:

**§63.11935 What CEMS and CPMS requirements must I meet to demonstrate initial and continuous compliance with the emission standards for process vents?**

(a) *General requirements for CEMS and CPMS.* You must meet the requirements in paragraph (b) of this section for each CEMS specified in §63.11925(c) used to demonstrate compliance with the emission limits for process vents in Table 1, 1b, 2, or 2b to this subpart. You must meet the CPMS requirements in paragraph (c) of this section and establish your operating limits in paragraph (d) of this section for each operating parameter specified in Table 5 to this subpart for each process vent control device specified in §63.11925(b) that is used to comply with the emission limits for process vents in Table 1, 1b, 2, or 2b to this subpart, except that flow indicators specified in §63.11940(a) are not subject to the requirements of this section.

(b) \* \* \*

(5) You must operate and maintain the CEMS in continuous operation according to the quality control program and performance evaluation test plan.

(6) \* \* \*

(i) A hydrogen chloride CEMS must meet the requirements of 40 CFR part 60, appendix B, performance specification 18, as well as the requirements of 40 CFR part 60, appendix F, procedure 6. A dioxin/furan CEMS must meet the requirements of the promulgated performance specification for the CEMS.

\* \* \* \* \*

(7) \* \* \*

(i) You must notify the Administrator 1 month before starting use of the CEMS.

(ii) You must notify the Administrator 1 month before stopping use of the CEMS, in which case you must also conduct a performance test within 60 days of ceasing operation of the system.

\* \* \* \* \*

(d) *Establish operating limit.* For each operating parameter that must be monitored in §63.11925(c) for process vent control devices, you must establish an operating limit as specified in paragraphs (d)(1) through (4) of this section. You must establish each operating limit as an operating parameter range, minimum operating parameter level, or maximum operating parameter level as specified in Table 7 to this subpart. Where this subpart does not specify which format to use for your operating limit (*e.g.*, operating range or minimum operating level), you must determine which format is best to establish proper operation of the control device such that you are meeting the emission limits specified in Table 1, 1b, 2, or 2b to this subpart.

(1) For process vent control devices, the operating limit established for each monitored parameter specified in §63.11940 must be based on the operating parameter values recorded during any performance test conducted to demonstrate compliance as required by

§63.11925(d)(4) and (e)(4) and may be supplemented by engineering assessments and/or manufacturer's recommendations. You are not required to conduct performance tests over the entire range of allowed operating parameter values. The established operating limit must represent the conditions for which the control device is meeting the emission limits specified in Table 1, 1b, 2, or 2b to this subpart.

(2) \* \* \*

(iii) The rationale for the established operating limit, including any data and calculations used to develop the operating limit and a description explaining why the operating limit indicates proper operation of the control device.

\* \* \* \* \*

(3) For batch processes, you may establish operating limits for individual batch emission episodes, including each distinct episode of process vent emissions or each individual type of batch process that generates wastewater, if applicable. You must provide rationale in a batch pre-compliance report as specified in §63.11985(c)(2) instead of the notification of compliance status for the established operating limit. You must include any data and calculations used to develop the operating limits and a description explaining why each operating limit indicates proper operation of the control device during the specific batch emission episode.

\* \* \* \* \*

21. Section 63.11940 is amended by revising the introductory text and paragraphs (b) introductory text, (b)(3)(ii), (c) introductory text, (c)(2)(ii), (d) introductory text, (d)(1), (e) introductory text, (f), and (g) introductory text to read as follows:

**§63.11940 What continuous monitoring requirements must I meet for control devices**

**required to install CPMS to meet the emission limits for process vents?**

As required in §63.11925(c), you must install and operate the applicable CPMS specified in paragraphs (a) through (g) of this section for each control device you use to comply with the emission limits for process vents in Table 1, 1b, 2, or 2b to this subpart. You must monitor, record, and calculate CPMS data averages as specified in Table 7 to this subpart. Paragraph (h) of this section provides an option to propose alternative monitoring parameters or procedures.

\* \* \* \* \*

(b) *Thermal oxidizer monitoring.* If you are using a thermal oxidizer to meet an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must equip the thermal oxidizer with the monitoring equipment specified in paragraphs (b)(1) through (3) of this section, as applicable.

\* \* \* \* \*

(3) \* \* \*

(ii) You must conduct annual internal inspections of the catalyst bed to check for fouling, plugging, or mechanical breakdown. You must also inspect the bed for channeling, abrasion, and settling. If any of the aforementioned conditions are found during the annual internal inspection of the catalyst, you must replace the catalyst bed or take other corrective action consistent with the manufacturer's recommendations within 15 days or by the next time any process vent stream is collected by the control device, whichever is later. If the catalyst bed is replaced and is not of like type or manufacturer as the old catalyst or is not as efficient as the old catalyst then you must conduct a new performance test according to §63.11945 to determine destruction efficiency. If a catalyst bed is replaced and the replacement catalyst is of like type or

manufacturer as the old catalyst or is as efficient as or more efficient than the old catalyst, then a new performance test to determine destruction efficiency is not required.

(c) *Absorber and acid gas scrubber monitoring.* If you are using an absorber or acid gas scrubber to meet an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must install the monitoring equipment specified in paragraphs (c)(1) through (3) of this section.

\* \* \* \* \*

(2) \* \* \*

(ii) If the difference in the inlet gas stream temperature and the inlet liquid stream temperature is greater than 38 degrees Celsius (100.4 degrees Fahrenheit), you may install and operate a temperature monitoring device at the scrubber gas stream exit.

\* \* \* \* \*

(d) *Regenerative adsorber monitoring.* If you are using a regenerative adsorber to meet an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must install and operate the applicable monitoring equipment listed in paragraphs (d)(1) through (5) of this section, and comply with the requirements in paragraphs (d)(6) and (7) of this section. If the adsorption system water is wastewater as defined in §63.12005, then it is subject to the requirements of §63.11965.

(1) For non-vacuum regeneration systems, an integrating regeneration stream flow monitoring device having an accuracy of  $\pm 10$  percent and capable of recording the total regeneration stream mass flow for each regeneration cycle.

\* \* \* \* \*

(e) *Non-regenerative adsorber monitoring.* If you are using a non-regenerative adsorber, or canister type system that is sent off site for regeneration or disposal, to meet an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must install a system of dual adsorber units in series and conduct the monitoring and bed replacement as specified in paragraphs (e)(1) through (4) of this section.

\* \* \* \* \*

(f) *Condenser monitoring.* If you are using a condenser to meet an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must install and operate a condenser exit gas temperature monitoring device.

(g) *Other control devices.* If you use a control device other than those listed in this subpart to comply with an emission limit in Table 1, 1b, 2, or 2b to this subpart and you are required to use CPMS as specified in §63.11925(c), you must comply with the requirements as specified in paragraphs (g)(1) and (2) of this section.

\* \* \* \* \*

22. Section 63.11945 is amended by revising paragraphs (a) and (b) introductory text to read as follows:

**§63.11945 What performance testing requirements must I meet for process vents?**

(a) *General.* For each control device used to meet the emission limits for process vents in Table 1, 1b, 2, or 2b to this subpart, you must conduct the initial and periodic performance tests required in §63.11925(d) and (e) and as specified in §63.11896 using the applicable test methods and procedures specified in Table 8 to this subpart and paragraphs (b) through (d) of this section.

(b) *Process operating conditions.* You must conduct performance tests under the conditions specified in paragraphs (b)(1) through (3) of this section, as applicable. You must

record the process information that documents operating conditions during the test and include in such record an explanation to support how such conditions represent the conditions specified in paragraphs (b)(1) through (3) of this section. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests. In all cases, a site-specific plan must be submitted to the Administrator for approval prior to testing in accordance with §63.7(c). The test plan must include the emission profiles described in §63.11925(g).

\* \* \* \* \*

23. Section 63.11955 is amended by revising paragraph (d)(1) to read as follows:

**§63.11955 What are my initial and continuous compliance requirements for other emission sources?**

\* \* \* \* \*

(d) \* \* \*

(1) Each gasholder must be vented back into the process for reuse or routed to a closed vent system and control device meeting the requirements of §§63.11925 through 63.11950.

\* \* \* \* \*

24. Section 63.11960 is amended by:

a. Revising paragraphs (a), (b) introductory text, and (b)(1) introductory text;

b. Adding paragraph (b)(2);

c. Revising paragraphs (c)(1)(iii) and (iv), (c)(2) introductory text, (c)(2)(i), and (c)(2)(ii) introductory text;

d. Revising parameter “ $C_{Gi}$ ” of Equation 1 in paragraph (c)(2)(ii)(A);

e. Revising paragraphs (c)(2)(ii)(B), (d)(3), (e)(1)(i) through (iv), and (f) introductory text;

f. Revising parameter “ $C_i$ ” of Equation 2 in paragraph (f); and

g. Adding paragraphs (g) and (h).

The revisions and additions read as follows:

**§63.11960 What are my initial and continuous compliance requirements for stripped resin?**

(a) *Emission limits.* You must meet the applicable vinyl chloride and total non-vinyl chloride organic HAP emission limits for stripped resin specified in Table 1, 1b, 2, or 2b to this subpart.

(b) *Determination of total non-vinyl chloride organic HAP.* You must develop a facility-specific list of HAP that are expected to be present in each grade of resin produced by your PVCPU using the procedures specified for resin concentration in paragraph (b)(1) of this section or the alternative mass emission rate limit as specified in paragraph (b)(2) of this section. This list must be kept current and must be available for inspection by the Administrator. This list must include the identification of each grade of resin produced, each HAP expected to be present in that grade of resin, and the CAS number for each HAP.

(1) For the purposes of demonstrating initial and continuous compliance as required in paragraphs (c) and (d) of this section, you must meet the requirements specified in paragraphs (b)(1)(i) and (ii) of this section.

\* \* \* \* \*

(2) For the purposes of demonstrating initial and continuous compliance with the alternative mass emission rates as specified in paragraphs (g) and (h) of this section, you must meet the requirements specified in paragraphs (b)(2)(i) through (iii) of this section.

(i) The process components associated with the stripped resin process must be enclosed and routed through a closed vent system meeting the requirements in §§63.11925 through 63.11950 for the closed vent system and control device.

(ii) You must sample the stack emissions for all Table 10 HAP (as defined in §63.12005) using the appropriate test methods specified in Table 8 to this subpart and the procedures specified in §63.11945.

(iii) You must also sample the stack emissions for any HAP that are not Table 10 HAP but are expected to be present based on your facility-specific list of HAP using the appropriate test methods specified in Table 8 to this subpart and the procedures specified in §63.11945.

(c) \* \* \*

(1) \* \* \*

(iii) For continuous processes, during a 24-hour sampling period, collect one grab sample at intervals of 8 hours or per grade of PVC produced, whichever is more frequent. Each sample must be taken as the resin flows out of the stripper.

(iv) For batch processes, during a 24-hour sampling period, for each batch of each resin grade produced, collect one grab sample. Each sample must be taken immediately following the completion of the stripping operation.

(2) Demonstrate initial compliance with the vinyl chloride and total non-vinyl chloride organic HAP emission limits in Table 1, 1b, 2, or 2b to this subpart as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) Calculate the vinyl chloride 24-hour arithmetic average for each stripper using the vinyl chloride measured for the grab samples collected as specified in paragraphs (c)(1)(iii) and

(iv) of this section and the calculation procedure specified in either paragraph (c)(2)(ii)(A) or (B) of this section.

(ii) Calculate the total non-vinyl chloride organic HAP 24-hour arithmetic average for each stripper by first using the total non-vinyl chloride organic HAP measured for the grab samples collected as specified in paragraphs (c)(1)(iii) and (iv) of this section and the calculation procedure specified in paragraph (f) of this section to determine the total non-vinyl chloride organic HAP concentration of each sample ( $C_{\text{TNVCH}}$ ). Then, use the  $C_{\text{TNVCH}}$  and the calculation procedure specified in either paragraph (c)(2)(ii)(A) or (B) of this section to calculate the total non-vinyl chloride organic HAP 24-hour arithmetic average.

(A) \* \* \*

$C_{G_i}$  = 24-hour average concentration of vinyl chloride or total non-vinyl chloride organic HAP in resin grade  $G_i$ , ppmw. For non-vinyl chloride organic HAP,  $C_{\text{TNVCH}}$  from paragraph (f) of this section is used as  $C_{G_i}$  for each resin grade.

\* \* \* \* \*

(B) If only one resin grade was produced during the 24-hour sampling event, use the 24-hour arithmetic average vinyl chloride and total non-vinyl chloride organic HAP concentrations for the one resin grade calculated as specified in paragraphs (c)(2)(i) and (ii) of this section for each stripper or calculate the 24-hour arithmetic average vinyl chloride and total non-vinyl chloride organic HAP concentrations for all strippers used to process the one grade of resin.

(d) \* \* \*

(3) You must demonstrate continuous compliance with the vinyl chloride and total non-vinyl chloride organic HAP emission limit for stripped resin in Table 1, 1b, 2, or 2b to this subpart as specified in paragraphs (c)(2)(i) and (ii) of this section.

(e) \* \* \*

(1) \* \* \*

(i) SW-846-8260B (incorporated by reference, see §63.14) for analysis of volatile organic compounds listed in Table 10 of this subpart or the site-specific HAP list.

(ii) SW-846-8270D (incorporated by reference, see §63.14) for analysis of semivolatile organic compounds listed in Table 10 of this subpart or the site-specific HAP list.

(iii) SW-846-8315A (incorporated by reference, see §63.14) for analysis of aldehyde compounds listed in Table 10 of this subpart or the site-specific HAP list.

(iv) SW-846-8015C (incorporated by reference, see §63.14) for analysis of alcohol compounds listed in Table 10 of this subpart or the site-specific HAP list.

\* \* \* \* \*

(f) *Method for calculating total non-vinyl chloride organic HAP concentration.* For each stripped resin sample analyzed using the methods specified in paragraph (e) of this section, calculate the sum of the measured concentrations of each HAP analyzed as required in paragraph (b)(1) of this section by using Equation 2 to this section.

\* \* \* \* \*

$C_i$  = Concentration of individual HAP present in the stripped resin sample analyzed pursuant to paragraph (b)(1) of this section excluding vinyl chloride, in ppmw, where a value of zero should be used for any HAP concentration that is below the detection limit.

(g) *Method for calculating alternative mass emission rates.* If you elect to demonstrate initial or continuous compliance with the alternative mass emissions rates (g/kg) in Tables 1b and 2b of this subpart, calculate the mass of the HAP emitted to the atmosphere of vinyl chloride and each HAP analyzed as required in paragraph (b)(2) of this section by using Equation 3 of this section.

$$E_i = \frac{C_i D_i Q K (10^{-6})}{Z} \quad (\text{Eq. 3})$$

- $E_i$  = HAP emissions for individual HAP  $i$ , g/kg (lb/lb) product.
- $C_i$  = Concentration of HAP  $i$  according to methods found in Table 8 to this subpart and the procedures specified in §63.11945, in ppmv. A value of zero should be used for any HAP concentration that is below the detection limit.
- $D_i$  = Density of HAP  $i$  at standard conditions, kg/m<sup>3</sup> (lb/ft<sup>3</sup>).
- $Q$  = Volumetric flow rate as determined by Method 2 of appendix A to part 60 of this chapter, at standard conditions, m<sup>3</sup>/hr (ft<sup>3</sup>/hr).
- $K$  = Unit conversion factor, 1,000 g/kg (1 lb/lb).
- $10^{-6}$  = Conversion factor for ppm.
- $Z$  = Production rate of dry resin, kg/hr (lb/hr).

(h) *Method for calculating total non-vinyl chloride organic HAP mass emission rates.* If you elect to demonstrate initial or continuous compliance with the alternative total non-vinyl chloride organic HAP mass emissions rates (g/kg) in Tables 1b and 2b of this subpart, calculate the sum of the mass emission rates of each HAP required in paragraph (b)(2) of this section using the results from paragraph (g) and Equation 4 of this section.

$$E_{TNVCH} = \sum_{i=1}^n E_i \quad (\text{Eq. 4})$$

- $E_{TNVCH}$  = Mass emission rate of total non-vinyl chloride organic HAP compounds in the stripped resin sample, in g/kg product (lb/lb product).
- $E_i$  = Mass emission rate of individual HAP present in the stripped resin sample analyzed pursuant to paragraph (b)(1) of this section excluding vinyl chloride, in g/kg product (lb/lb product).

25. Section 63.11965 is amended by revising paragraphs (a), (b)(1)(i), (b)(2), (c) through (e), (f) introductory text, and (f)(1)(i) and (ii) to read as follows:

**§63.11965 What are my general compliance requirements for wastewater?**

(a) *Emission limits.* You must meet the emission limits specified in Table 1, 1b, 2, or 2b to this subpart for each process wastewater stream before being mixed with any other process wastewater stream, before being exposed to the atmosphere, and before being discharged from the affected source.

(b) \* \* \*

(1) \* \* \*

(i) For treated process wastewater streams, you must collect process wastewater samples at the outlet of the treatment process and before the process wastewater stream is mixed with any other process wastewater stream containing vinyl chloride or total non-vinyl chloride organic HAP concentrations less than the applicable emission limits specified in Table 1, 1b, 2, or 2b to this subpart, before being exposed to the atmosphere, and before being discharged from the affected source.

\* \* \* \* \*

(2) You must measure the concentration of vinyl chloride, and if applicable, total non-vinyl chloride organic HAP, using the test methods and procedures specified in §63.11980.

(c) *Requirements for process wastewater streams that must be treated.* You must treat each process wastewater stream that has a vinyl chloride or total non-vinyl chloride organic HAP concentration equal to or greater than the applicable emission limits specified in Table 1, 1b, 2, or 2b to this subpart as determined pursuant to paragraph (b) of this section, to reduce the concentration below the applicable emission limits specified in Table 1, 1b, 2, or 2b to this subpart. You must route wastewater streams through hard-piping to the treatment process and route the vent stream from the treatment process to a closed vent system and control device

meeting the requirements of §§63.11925 through 63.11950. You must also meet the initial and continuous compliance requirements specified in §§63.11970(a) and 63.11975(a) and (b).

(d) *Requirements for process wastewater streams that do not need to be treated.* For each process wastewater stream that has a vinyl chloride or total non-vinyl chloride organic HAP concentration less than the applicable emission limits specified in Table 1, 1b, 2, or 2b to this subpart as determined pursuant to paragraph (b) of this section, you must meet the initial and continuous compliance requirements specified in §§63.11970(b) and 63.11975(c).

(e) *Maintenance wastewater.* You must comply with the requirements specified in §63.105(b) and (c) for maintenance wastewater containing Table 10 HAP (as defined in §63.12005).

(f) *Determination of total non-vinyl chloride organic HAP.* If you are subject to the emission limits specified in Table 1 or 2 to this subpart, then you must develop a facility-specific list of HAP that are expected to be present in each process wastewater stream at your PVCPU and comply with paragraph (f)(1) of this section. This list must be continuously updated and must be available for inspection by the Administrator. This list must include the identification of each HAP expected to be present in each process wastewater stream, and the CAS number for each HAP.

(1) \* \* \*

(i) You must analyze each process wastewater sample for all Table 10 HAP using the test methods specified in §63.11980(a)(2) and (3).

(ii) You must also analyze each process wastewater sample for any HAP that are not Table 10 HAP but are expected to be present in that sample based on your facility-specific list of HAP using the appropriate test method specified in §63.11980(a)(2).

\* \* \* \* \*

26. Section 63.11970 is revised to read as follows:

**§63.11970 What are my initial compliance requirements for process wastewater?**

(a) *Demonstration of initial compliance for process wastewater streams that must be treated.* For each process wastewater stream that must be treated as specified in §63.11965(b) and (c), you must conduct an initial performance test for the wastewater treatment process, measuring the concentration of vinyl chloride, and if applicable, total non-vinyl chloride organic HAP, in the wastewater stream at the outlet of the wastewater treatment process before the wastewater is exposed to the atmosphere, mixed with any other process stream, and before being discharged from the affected facility, using the test method and procedures specified in §63.11980(a).

(b) *Demonstration of initial compliance for process wastewater streams that are not required to be treated.* For each process wastewater stream that has a vinyl chloride or total non-vinyl chloride organic HAP concentration less than the applicable emission limits specified in Tables 1, 1b, 2, or 2b to this subpart, you must use the collection and measurement procedures specified in §63.11965(b)(1)(ii) and (b)(2) to demonstrate initial compliance.

27. Section 63.11975 is revised to read as follows:

**§63.11975 What are my continuous compliance requirements for process wastewater?**

(a) For each process wastewater stream that must be treated as specified in §63.11965(b) and (c), you must demonstrate continuous compliance as specified in paragraph (b) of this section. For each process wastewater stream for which you initially determine in §63.11970(b) that treatment is not required, you must demonstrate continuous compliance as specified in paragraph (c) of this section.

(b) For each process wastewater stream that must be treated according to §63.11965(b) and (c), you must demonstrate continuous compliance with the emission limits specified in Table 1, 1b, 2, or 2b to this subpart by following the procedures specified in paragraphs (b)(1) and (2) of this section.

(1) Following your demonstration of initial compliance in §63.11970(a), make monthly measurements of the vinyl chloride, and if applicable, total non-vinyl chloride organic HAP, concentrations using the procedures and methods specified in §63.11965(b)(1)(i) and (b)(2).

(2) You must demonstrate continuous compliance with the emission limits in Table 1, 1b, 2, or 2b to this subpart on a monthly basis, using the monthly concentration measurement specified in paragraph (b)(1) of this section.

(c) For each wastewater stream for which you initially determine in §63.11970(b) that treatment is not required, you must demonstrate continuous compliance as specified in paragraphs (c)(1) and (2) of this section.

(1) Conduct annual performance tests, measuring the vinyl chloride, and if applicable, total non-vinyl chloride organic HAP concentrations using the procedures and methods specified in §63.11965(b)(1)(ii) and (b)(2).

(2) If any annual performance test conducted as specified in paragraph (c)(1) of this section results in a concentration of vinyl chloride or total non-vinyl chloride organic HAP in the process wastewater stream that is greater than or equal to the applicable emission limits in Table 1, 1b, 2, or 2b to this subpart, then you must meet the requirements of §63.11965(c) and you must demonstrate initial and continuous compliance as specified in §63.11970 and this section.

28. Section 63.11980 is amended by revising paragraphs (a) introductory text, (a)(1), and (b) introductory text to read as follows:

**§63.11980 What are the test methods and calculation procedures for process wastewater?**

(a) *Performance test methods and procedures.* You must determine the concentration of vinyl chloride, and if applicable, total non-vinyl chloride organic HAP, using the test methods and procedures specified in paragraphs (a)(1) through (4) of this section. Upon request, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(1) You must conduct performance tests during worst-case operating conditions for the PVCPU when the process wastewater treatment process is operating as close as possible to maximum representative operating conditions. If the wastewater treatment process will be operating at several different sets of operating conditions, you must supplement the testing with additional testing, modeling, or engineering assessments to demonstrate compliance with the emission limits.

\* \* \* \* \*

(b) *Method for calculating total non-vinyl chloride organic HAP concentration.* If you are subject to the emission limits specified in Table 1 or 2 to this subpart, then for each process wastewater stream analyzed using the methods specified in paragraph (a) of this section, calculate the sum of the measured concentrations of each HAP analyzed as required in §63.11965(f)(1) by using Equation 1 to this section.

\* \* \* \* \*

29. Section 63.11985 is amended by:

- a. Revising paragraphs (a)(4), (a)(7)(ii), (a)(8)(i) and (ii), (b)(4)(i) introductory text, (b)(4)(i)(A), (b)(6) through (8), (b)(10) introductory text, and (b)(10)(v);
- b. Removing and reserving paragraph (b)(11); and

c. Revising paragraphs (b)(12), (c)(1), (2), and (8) and (c)(9)(i) and (ii).

The revisions read as follows:

**§63.11985 What notifications and reports must I submit and when?**

\* \* \* \* \*

(a) \* \* \*

(4) You must include the operating limit for each monitoring parameter identified for each control device used to meet the emission limits in Table 1, 1b, 2, or 2b to this subpart, as determined pursuant to §63.11935(d). This report must include the information in §63.11935(d)(2), as applicable.

\* \* \* \* \*

(7) \* \* \*

(ii) You must include results of the initial testing used to determine initial compliance with the stripped resin limits in Table 1, 1b, 2, or 2b to this subpart.

(8) \* \* \*

(i) You must include an identification of each process wastewater stream subject to the requirements of this subpart, and the results of your determination for each stream as to whether it must be treated to meet the limits of Table 1, 1b, 2, or 2b to this subpart. You must also include a description of the treatment process to be used for each process wastewater stream that requires treatment.

(ii) You must include results of the initial sampling used to determine initial compliance with the vinyl chloride limits in Table 1, 1b, 2, or 2b to this subpart.

\* \* \* \* \*

(b) \* \* \*

(4) \* \* \*

(i) Deviations using CEMS or CPMS. For each deviation from an emission limit or operating limit where a CEMS or CPMS is being used to comply with the process vent emission limits in Table 1, 1b, 2, or 2b to this subpart, you must include the information in paragraphs (b)(4)(i)(A) through (E) of this section.

(A) For CEMS, the 3-hour block average value calculated for any period when the value is higher than an emission limit in Table 1, 1b, 2, or 2b to this subpart or when the value does not meet the data availability requirements defined in §63.11890(c).

\* \* \* \* \*

(6) You must include the records specified in §63.11990(j)(2) for other emission sources.

(7) For resin stripper operations, you must include the daily vinyl chloride and/or monthly total non-vinyl chloride organic HAP concentration or alternative mass emission rate results for each resin type produced within the PVCPU that did not meet the stripped resin emission limits in Table 1, 1b, 2, or 2b to this subpart, as applicable.

(8) For wastewater operations, you must include the results of monthly vinyl chloride and, if applicable, monthly total non-vinyl chloride organic HAP concentration results for each process wastewater stream discharged from the affected source that did not meet the process wastewater emission limits in Tables 1, 1b, 2, or 2b to this subpart.

\* \* \* \* \*

(10) If any pressure vessel closure device or closed vent system that contains a bypass has directly discharged to the atmosphere, or any closed vent system that is designed to be in vacuum service and is operating and not in vacuum service, as specified in §63.11910(c)(3) or §63.11930(c) or (h), you must submit to the Administrator the following information:

\* \* \* \* \*

(v) The measures adopted to prevent future such discharges.

\* \* \* \* \*

(12) Information required by this subpart, which is submitted with a Title V periodic report, does not need to be included in a subsequent compliance report required by this subpart or subpart referenced by this subpart. The Title V report must be referenced in the compliance report required by this subpart.

\* \* \* \* \*

(c) \* \* \*

(1) *Notification of inspection.* To provide the Administrator the opportunity to have an observer present, you must notify the Administrator at least 30 days before an inspection required by §63.11910(a)(3). If an inspection is unplanned and you could not have known about the inspection 30 days in advance, then you must notify the Administrator at least 7 days before the inspection. Notification must be made by telephone immediately followed by written documentation demonstrating why the inspection was unplanned. Alternatively, the notification including the written documentation may be made in writing and sent so that it is received by the Administrator at least 7 days before the inspection. If a delegated state or local agency is notified, you are not required to notify the Administrator. A delegated state or local agency may waive the requirement for notification of storage vessel inspections.

(2) *Batch pre-compliance report.* You must submit a batch pre-compliance report at least 6 months prior to the compliance date of this subpart (see §63.11875) that includes a description of the test conditions, data, calculations and other information used to establish operating limits according to §63.11935(d) for all batch operations. If you use an engineering assessment as

specified in §63.11950(i), then you must also include data or other information supporting a finding that the emissions estimation equations in §63.11950(a) through (h) are inappropriate. If the EPA disapproves the report, then you must still be in compliance with the emission limits and work practice standards of this subpart by your compliance date. To change any of the information submitted in the report, you must notify the EPA 60 days before you implement the planned change.

\* \* \* \* \*

(8) *Commencing and ceasing operation of CEMSs.* Before starting or stopping the use of CEMS, you must notify the Administrator as specified in §63.11935(b)(7).

(9) \* \* \*

(i) Beginning on [**date 60 days after date of publication of the final rule in the Federal Register**], within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in paragraphs (c)(9)(i)(A) through (C) of this section.

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

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

(C) *Confidential business information (CBI).* If you claim some of the information submitted under paragraph (a)(1) or (2) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraphs (c)(9)(i)(A) and (B) of this section.

(ii) Beginning on [**DATE 60 DAYS AFTER DATE OF PUBLICATION OF THE FINAL RULE IN THE FEDERAL REGISTER**], within 60 days after the date of completing each CEMS performance evaluation (as defined in §63.2), you must submit the results of the performance evaluation following the procedures specified in paragraphs (c)(9)(ii)(A) through (B) of this section.

(A) *Performance evaluations of CEMS measuring relative accuracy test audit (RATA) pollutants that are supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation.* Submit the results of the performance evaluation to the EPA via CEDRI, which

can be accessed through the EPA's CDX. The data must be submitted in a file format generated through the use of the EPA's ERT. Alternatively, you may submit an electronic file consistent with the XML schema listed on the EPA's ERT website.

*(B) Performance evaluations of CEMS measuring RATA pollutants that are not supported by the EPA's ERT as listed on the EPA's ERT website at the time of the evaluation.*

The results of the performance evaluation must be included as an attachment in the ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website.

Submit the ERT generated package or alternative file to the EPA via CEDRI.

*(C) Confidential business information (CBI).* If you claim some of the information submitted under paragraph (a)(1) or (2) of this section is CBI, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. EPA/OAQPS/CORE CBI Office, Attention: Group Leader, Measurement Policy Group, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraphs (c)(9)(ii)(A) and (B) of this section.

\* \* \* \* \*

30. Section 63.11990 is amended by:

- a. Revising paragraphs (b) introductory text and (b)(4);
- b. Adding paragraph (b)(7);
- c. Revising paragraphs (e)(3)(ii) and (h)(2);

- d. Adding paragraph (h)(3);
- e. Revising paragraph (i)(4); and
- f. Removing paragraph (i)(5).

The revisions and additions read as follows:

**§63.11990 What records must I keep?**

\* \* \* \* \*

(b) *Storage vessels*. For storage vessels, you must maintain the records specified in paragraphs (b)(1) through (7) of this section.

\* \* \* \* \*

(4) For each pressure vessel, you must keep records of the information specified in §63.11985(b)(10) and paragraph (c) of this section.

\* \* \* \* \*

(7) For storage vessels that use vapor balancing, you must keep the records specified in paragraphs (b)(7)(i) through (iii) of this section.

(i) A record of the certification required by §63.11910(e)(2).

(ii) If complying with §63.11910(e)(6)(ii), keep the records specified in paragraphs (b)(7)(ii)(A) and (B) of this section.

(A) A record of the equipment to be used and the procedures to be followed when reloading the railcar, tank truck, or barge and displacing vapors to the storage vessel from which the liquid originates.

(B) A record of each time the vapor balancing system is used to comply with §63.11910(e)(6)(ii).

(iii) If complying with §63.11910(e)(6)(iii), you must keep records that demonstrate one or more of the conditions specified in §63.11910(d)(4)(i)(A) through (D) are met.

\* \* \* \* \*

(e) \* \* \*

(3) \* \* \*

(ii) In lieu of calculating and recording the average value specified in paragraph (e)(3)(i) of this section, if all 1-hour averages specified in §63.11935(e) demonstrate compliance with your parameter operating limit or the applicable pollutant emission limit in Table 1, 1b, 2, or 2b to this subpart for the block average period, you may record a statement that all recorded 1-hour averages met the operating limit or emission limit, as applicable, and retain for 5 years this statement and all recorded CPMS or CEMS data for the block average period.

\* \* \* \* \*

(h) \* \* \*

(2) The total quantity (pounds) of each resin grade produced per day and the total quantity of resin processed by each resin stripper or group of strippers, identified by resin type and resin grade, per day.

(3) If you elect to demonstrate initial or continuous compliance with the alternative mass emissions rates (g/kg) in Table 1b or 2b to this subpart, you must keep the records specified in paragraphs (e) through (g) of this section for process vents and closed vent systems for equipment downstream of the stripper.

(i) \* \* \*

(4) All testing data, including monthly measurements of the concentrations of vinyl chloride, and if applicable, the concentration of total non-vinyl chloride organic HAP in each process wastewater stream required to be measured, as specified in §63.11975.

\* \* \* \* \*

31. Section 63.12005 is amended by:

- a. Removing the definition for “Affirmative defense”;
- b. Revising the definition for “Batch process vent”;
- c. Adding in alphabetical order a definition for “Closure device”;
- d. Removing the definition for “Container”;
- e. Revising the definition for “Continuous process vent”;
- f. Removing the definition for “Corrective action plan”;
- g. Revising the definitions for “Dispersion process” and “First attempt at repair”;
- h. Removing the definition for “Operating day”;
- i. Revising the definitions for “Polyvinyl chloride and copolymers production process unit or PVCPU,” “Polyvinyl chloride copolymer,” “Polyvinyl chloride homopolymer,” “Process component,” “Process condenser,” “Process vent,” “Product,” and “PVC-combined process vent”;
- j. Removing the definition for “PVC-only process vent”;
- k. Adding in alphabetical order a definition for “PVC process vent”;
- l. Revising the definition for “Repaired”;
- m. Removing the definitions for “Root cause analysis” and “Solution process”;
- n. Revising the definitions for “Total non-vinyl chloride organic HAP” and “Type of resin”;

- o. Removing the definition for “Unloading operations”; and
- p. Adding in alphabetical order a definition for “Vapor balancing system.”

The revisions and additions read as follows:

**§63.12005 What definitions apply to this subpart?**

\* \* \* \* \*

*Batch process vent* means a vent from a batch operation from a PVCPU through which a HAP-containing gas stream has the potential to be released to the atmosphere except that it is required by this subpart to be routed to a closed vent system and control device. Emissions for all emission episodes associated with the unit operation(s) are part of the batch process vent. Batch process vents also include vents with intermittent flow from continuous operations. Examples of batch process vents include, but are not limited to, vents on condensers used for product recovery, polymerization reactors, and process tanks.

\* \* \* \* \*

*Closure device* means a cover, cap, hatch, lid, plug, seal, valve, or other type of fitting that, when the device is secured in the closed position, prevents or reduces air emissions to the atmosphere by blocking an opening in a fixed roof storage vessel or pressure vessel.

\* \* \* \* \*

*Continuous process vent* means a vent from a continuous PVCPU operation through which a HAP-containing gas stream has the potential to be released to the atmosphere except that it is required by this subpart to be routed to a closed vent system and control device and has the following characteristics:

- (1) The gas stream originates as a continuous flow from any continuous PVCPU operation during operation of the PVCPU.

(2) The discharge into the closed vent system and control device meets at least one of the following conditions:

(i) Is directly from any continuous operation.

(ii) Is from any continuous operation after passing solely (*i.e.*, without passing through any other unit operation for a process purpose) through one or more recovery devices within the PVCPU.

(iii) Is from a device recovering only mechanical energy from a gas stream that comes either directly from any continuous operation, or from any continuous operation after passing solely (*i.e.*, without passing through any other unit operation for a process purpose) through one or more recovery devices within the PVCPU.

\* \* \* \* \*

*Dispersion process* means a process for producing polyvinyl chloride resin that is characterized by either emulsion or microsuspension polymerization. Emulsion polymerization uses water soluble initiators and is distinguished by metering in surfactants as the reaction progresses. In microsuspension polymerization, homogenizers are first mixed with a monomer outside of the polymerization reactor and oil soluble initiators are then added before charging the reactor. These two polymerization techniques produce fine particles, typically less than 10 microns, with little or no porosity. Emulsifier levels vary but agitation is very mild compared to other PVC polymerization processes. The final product is dried to powder form.

\* \* \* \* \*

*First attempt at repair*, for the purposes of this subpart, means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere, followed by monitoring as specified in §63.11930(f) or §63.1023(b) and (c), as applicable, to verify whether

the leak is repaired, unless the owner or operator determines by other means that the leak is not repaired.

\* \* \* \* \*

*Polyvinyl chloride and copolymers production process unit or PVCPU* means a collection of process components assembled and connected by hard-piping or duct work, used to process raw materials and to manufacture polyvinyl chloride and/or polyvinyl chloride copolymers. A PVCPU includes, but is not limited to, polymerization reactors; resin stripping operations; resin blend tanks; resin centrifuges; resin dryers; resin product separators; recovery devices; reactant and raw material charge vessels and tanks, holding tanks, mixing and weighing tanks; finished resin product storage vessels or storage silos; finished resin product loading operations; connected ducts and piping; equipment including pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves and connectors and instrumentation systems.

*Polyvinyl chloride copolymer* means a synthetic thermoplastic polymer that is derived from the simultaneous polymerization of vinyl chloride and one or more additional monomers. The additional monomers are reactive with vinyl chloride and become part of the polymer chain. Additives used in polyvinyl chloride copolymer polymerization for stabilization and/or particle size control are not as reactive, do not become part of the polymer chain, and are not considered to be monomers in the polymerization process. Polyvinyl chloride copolymer is produced by different processes, including, but not limited to, suspension process, dispersion process, and suspension blending process.

*Polyvinyl chloride homopolymer* means a synthetic thermoplastic polymer that is derived from the polymerization of vinyl chloride and has the general chemical structure  $(-H_2CCHCl-)_n$ .

Polyvinyl chloride homopolymer is typically a white powder or colorless granule. Polyvinyl chloride homopolymer is produced by different processes, including, but not limited to, suspension process, dispersion process, suspension blending process, and bulk process.

\* \* \* \* \*

*Process component* means any unit operation or group of unit operations or any part of a process or group of parts of a process that are assembled to perform a specific function (*e.g.*, polymerization reactor, dryers, etc.). Process components include equipment, pressure vessels, process condensers, process tanks, recovery devices, and resin strippers, as defined in this section.

*Process condenser* means a condenser whose primary purpose is to recover material as an integral part of a batch or continuous process. All condensers recovering condensate from a batch or continuous process at or above the boiling point or all condensers in line prior to a vacuum source are considered process condensers. Typically, a primary condenser or condensers in series are considered to be integral to the batch or continuous regulated process if they are capable of and normally used for the purpose of recovering chemicals for fuel value (*i.e.*, net positive heating value), use, reuse or for sale for fuel value, use or reuse. This definition does not apply to a condenser that is used to remove materials that would hinder performance of a downstream recovery device as follows:

- (1) To remove water vapor that would cause icing in a downstream condenser.
- (2) To remove water vapor that would negatively affect the adsorption capacity of carbon in a downstream carbon adsorber.
- (3) To remove high molecular weight organic compounds or other organic compounds that would be difficult to remove during regeneration of a downstream adsorber.

\* \* \* \* \*

*Process vent* means a vent stream that is the result of the manifolding of each and all batch process vent, continuous process vent, or miscellaneous vent resulting from the affected facility into a closed vent system and into a common header that is routed to a control device. The process vent standards apply at the outlet of the control device. A process vent is either a PVC process vent or a PVC-combined process vent.

\* \* \* \* \*

*Product* means a polymer produced using vinyl chloride monomer and varying in additives (*e.g.*, initiators, terminators, etc.); catalysts; or in the relative proportions of vinyl chloride monomer with one or more other monomers, and that is manufactured by a process unit. With respect to polymers, more than one recipe may be used to produce the same product, and there can be more than one grade of a product. Product also means a chemical that is not a polymer, which is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

*PVC-combined process vent* means a process vent that originates from a PVCPU and is combined with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride prior to being controlled or emitted to the atmosphere. A vent stream originating from process components associated with the stripped resin downstream of the resin stripper (*e.g.*, dryers, centrifuges, filters) is not considered a PVC-combined process vent.

*PVC process vent* means a process vent that originates from a PVCPU and is not combined with one or more process vents originating from the production of vinyl chloride monomer or ethylene dichloride prior to being controlled or emitted to the atmosphere. A vent

stream originating from process components associated with the stripped resin downstream of the resin stripper (*e.g.*, dryers, centrifuges, filters) is not considered a PVC process vent.

\* \* \* \* \*

*Repaired*, for the purposes of this subpart, means equipment that is adjusted or otherwise altered to eliminate a leak as defined in the applicable sections of this subpart; and unless otherwise specified in applicable provisions of this subpart or other subpart referenced by this subpart, is inspected as specified in §63.11930(f) to verify that emissions from the equipment are below the applicable leak definition.

\* \* \* \* \*

*Total non-vinyl chloride organic HAP* means, for the purposes of this subpart, the sum of the measured concentrations of each HAP, as calculated according to the procedures specified in §§63.11960(f) and 63.11980(b) or the sum of the mass emission rates of each HAP, as calculated according to the procedures specified in §63.11960(h).

*Type of resin* means the broad classification of PVC homopolymer and copolymer resin referring to the basic manufacturing process for producing that resin, including, but not limited to, suspension, dispersion, suspension blending, and bulk.

*Vapor balancing system* means:

(1) A piping system that collects HAP vapors displaced from transport vehicles (*i.e.*, railcar, tank truck, barge) during storage vessel loading and routes the collected vapors to the storage vessel from which the HAP being loaded originated or to another storage vessel connected to a common header, without emissions to the atmosphere; or

(2) A piping system that collects HAP vapors displaced from the loading of a storage vessel and routes the collected vapors to the transport vehicle from which the storage vessel is filled, without emissions to the atmosphere.

\* \* \* \* \*

32. Table 1 to subpart HHHHHHH of part 63 is amended by revising the table heading and row 1.a to read as follows:

TABLE 1 TO SUBPART HHHHHHH OF PART 63—EMISSION LIMITS AND STANDARDS FOR EXISTING AFFECTED SOURCES NOT COMPLYING WITH §63.11880(D)

<b>For this type of emission point . . .</b>	<b>And for this air pollutant . . .</b>	<b>And for an affected source producing this type of PVC resin . . .</b>	<b>You must meet this emission limit . . .</b>
1. PVC process vents <sup>a</sup>	a. Vinyl chloride	All resin types	6.0 parts per million by volume (ppmv).
* * * * *			

<sup>a</sup>Emission limits at 3 percent oxygen, dry basis.

\* \* \* \* \*

33. Table 1b to subpart HHHHHHH of part 63 is added to read as follows:

TABLE 1B TO SUBPART HHHHHHH OF PART 63—EMISSION LIMITS AND STANDARDS FOR EXISTING AFFECTED SOURCES COMPLYING WITH §63.11880(D)

<b>For this type of emission point . . .</b>	<b>And for this air pollutant . . .</b>	<b>And for an affected source producing this type of PVC resin . . .</b>	<b>You must meet this emission limit . . .</b>
1. PVC process vents <sup>a</sup>	a. Vinyl chloride	All resin types	0.85 ppmv.
	b. Total hydrocarbons	All resin types	5.1 ppmv measured as propane.
	c. Total organic HAP <sup>b</sup>	All resin types	22 ppmv.
	d. Hydrogen chloride	All resin types	0.64 ppmv.
	e. Dioxins/furans (toxic equivalency basis)	All resin types	0.035 ng/dscm.

2. PVC-combined process vents <sup>a</sup>	a. Vinyl chloride	All resin types	0.85 ppmv.
	b. Total hydrocarbons	All resin types	9.1 ppmv measured as propane.
	c. Total organic HAP <sup>b</sup>	All resin types	9.7 ppmv.
	d. Hydrogen chloride	All resin types	3.9 ppmv.
	e. Dioxins/furans (toxic equivalency basis)	All resin types	0.68 ng/dscm.
3. Stripped resin	a. Vinyl chloride	i. Bulk resin	7.1 ppmw; or 0.0071 grams per kilogram of product resin, dry basis (g/kg). <sup>c</sup>
		ii. Dispersion resin	1300 ppmw; or 1.3 g/kg. <sup>c</sup>
		iii. Suspension resin	37 ppmw; or 0.037 g/kg. <sup>c</sup>
		iv. Suspension blending resin	140 ppmw; or 0.14 g/kg. <sup>c</sup>
		v. Copolymer resin	790 ppmw; or 0.79 g/kg. <sup>c</sup>
	b. Total non-vinyl chloride organic HAP	i. Bulk resin	170 ppmw; or 0.17 g/kg. <sup>c</sup>
		ii. Dispersion resin	240 ppmw; or 0.24 g/kg. <sup>c</sup>
		iii. Suspension resin	670 ppmw; or 0.67 g/kg. <sup>c</sup>
		iv. Suspension blending resin	500 ppmw; or 0.50 g/kg. <sup>c</sup>
		v. Copolymer resin	1900 ppmw; or 1.9 g/kg. <sup>c</sup>
4. Process Wastewater	a. Vinyl chloride	All resin types	0.73 ppmw.

<sup>a</sup>Emission limits at 3 percent oxygen, dry basis.

<sup>b</sup>Total organic HAP is alternative compliance limit for THC.

<sup>c</sup>If you elect to comply with the g/kg alternative mass emission limit for resins, you must comply with the requirements specified in §63.11960(b)(2).

34. Table 2 to subpart HHHHHHH of part 63 is amended by revising the table heading and rows 1.a, 2.e, and 3.a.i. to read as follows:

TABLE 2 TO SUBPART HHHHHHHH OF PART 63—EMISSION LIMITS AND STANDARDS FOR NEW AFFECTED SOURCES NOT COMPLYING WITH §63.11880(D)

For this type of emission point . . .	And for this air pollutant . . .	And for an affected source producing this type of PVC resin . . .	You must meet this emission limit . . .
1. PVC process vents <sup>a</sup>	a. Vinyl chloride	All resin types	0.56 ppmv.
* * *	* * *		
2. PVC-combined process vents <sup>a</sup>	* *	* *	*
	e. Dioxins/furans (toxic equivalency basis)	All resin types	0.034 ng/dscm.
3. Stripped resin	a. Vinyl chloride	i. Bulk resin	7.1 ppmw.
* * *	* * *		

<sup>a</sup>Emission limits at 3 percent oxygen, dry basis.

\* \* \* \* \*

35. Table 2b to subpart HHHHHHHH of part 63 is added to read as follows:

TABLE 2B TO SUBPART HHHHHHHH OF PART 63—EMISSION LIMITS AND STANDARDS FOR NEW AFFECTED SOURCES COMPLYING WITH §63.11880(D)

For this type of emission point . . .	And for this air pollutant . . .	And for an affected source producing this type of PVC resin . . .	You must meet this emission limit . . .
1. PVC process vents <sup>a</sup>	a. Vinyl chloride	All resin types	0.85 ppmv.
	b. Total hydrocarbons	All resin types	2.2 ppmv measured as propane.
	c. Total organic HAP <sup>b</sup>	All resin types	1.3 ppmv.
	d. Hydrogen chloride	All resin types	0.17 ppmv.
	e. Dioxins/furans (toxic equivalency basis)	All resin types	0.035 ng/dscm.
2. PVC-combined process vents <sup>a</sup>	a. Vinyl chloride	All resin types	0.85 ppmv.
	b. Total hydrocarbons	All resin types	2.2 ppmv measured as propane.
	c. Total organic HAP <sup>b</sup>	All resin types	5.9 ppmv.

	d. Hydrogen chloride	All resin types	1.4 ppmv.
	e. Dioxins/furans (toxic equivalency basis)	All resin types	0.051 ng/dscm.
3. Stripped resin	a. Vinyl chloride	i. Bulk resin	7.1 ppmw; or 0.0071 g/kg. <sup>c</sup>
		ii. Dispersion resin	480 ppmw; or 0.48 g/kg. <sup>c</sup>
		iii. Suspension resin	7.3 ppmw; or 0.0073 g/kg. <sup>c</sup>
		iv. Suspension blending resin	140 ppmw; or 0.14 g/kg. <sup>c</sup>
		v. Copolymer—all resin types	790 ppmw; or 0.79 g/kg. <sup>c</sup>
	b. Total non-vinyl chloride organic HAP	i. Bulk resin	170 ppmw; or 0.17 g/kg. <sup>c</sup>
		ii. Dispersion resin	66 ppmw; or 0.066 g/kg. <sup>c</sup>
		iii. Suspension resin	15 ppmw; or 0.015 g/kg. <sup>c</sup>
		iv. Suspension blending resin	500 ppmw; or 0.50 g/kg. <sup>c</sup>
		v. Copolymer resin	1900 ppmw; or 1.9 g/kg. <sup>c</sup>
4. Process Wastewater	a. Vinyl chloride	All resin types	0.57 ppmw.

<sup>a</sup>Emission limits at 3 percent oxygen, dry basis.

<sup>b</sup>Total organic HAP is alternative compliance limit for THC.

<sup>c</sup>If you elect to comply with the g/kg alternative mass emission limit for resins, you must comply with the requirements specified in §63.11960(b)(2).

36. Table 3 to subpart HHHHHHH of part 63 is revised to read as follows:

**TABLE 3 TO SUBPART HHHHHHHH OF PART 63—SUMMARY OF CONTROL REQUIREMENTS FOR STORAGE VESSELS AT NEW AND EXISTING SOURCES**

<b>If the storage vessel capacity (gallons) is ...</b>	<b>And the vapor pressure<sup>a</sup> (psia) is ...</b>	<b>Then, you must use...</b>
≥20,000 but <40,000	≥4	an internal or external floating roof storage vessel and meet the requirements in §63.11910(b) or a fixed roof storage vessel vented to a closed vent system and control device achieving 95 weight percent HAP reduction and meet the requirements of §63.11910(d).
≥40,000	≥0.75	
Any capacity	>11.1	a pressure vessel and meet the requirements of §63.11910(c).
All other capacity and vapor pressure combinations		a fixed roof and meet the requirements of §63.11910(a).

<sup>a</sup> Maximum true vapor pressure.

37. Table 4 to subpart HHHHHHHH of part 63 is amended by revising the entries for “§63.10(b)(2)(ii)” and “§63.10(c)(10),” removing the entry “63.10(c)(11), (c)(12)” and adding the entry “§63.10(c)(11), (c)(12)” in its place, and revising the entry “§63.10(d)(5)” to read as follows:

**TABLE 4 TO SUBPART HHHHHHHH OF PART 63—APPLICABILITY OF THE GENERAL PROVISIONS TO PART 63**

<b>Citation</b>	<b>Subject</b>	<b>Applies to subpart HHHHHHHH</b>	<b>Comment</b>
* * *	* * *		
§63.10(b)(2)(ii)	Recordkeeping of malfunctions	No.	
* * *	* * *		
§63.10(c)(10)	Recording nature and cause of malfunctions	No.	
§63.10(c)(11), (c)(12)	Recording corrective actions	No.	
* * *	* * *		
§63.10(d)(5)	SSM reports	No.	
* * *	* * *		

38. Table 5 to subpart HHHHHHHH of part 63 is amended by:

a. Removing the entry for “Flow to/from the control device” and adding the entry “Presence or absence of flow to/from the control device if flow could be intermittent” in its place;

b. Revising the entries for “Regeneration stream flow” and “Adsorber bed temperature” (both entries);

c. Removing the entry “Vacuum and duratio of regeneration” and adding the entry “Vacuum and duration of regeneration” in its place;

d. Revising the entries “Regeneration frequency,” “Adsorber operation valve sequencing and cycle time,” “Average adsorber bed life,” and “Outlet VOC concentration of the first adsorber bed in series.”

The additions and revisions read as follows:

TABLE 5 TO SUBPART HHHHHHHH OF PART 63—OPERATING PARAMETERS, OPERATING LIMITS AND DATA MONITORING, RECORDING AND COMPLIANCE FREQUENCIES FOR PROCESS VENTS

For these control devices, you must monitor these operating parameters ...	Establish the following operating limit during your initial performance test ...	Monitor, record, and demonstrate continuous compliance using these minimum frequencies		
		Data measurement	Data recording	Data averaging period for compliance
* * *	* * *	*	*	*
Presence or absence of flow to/from the control device if flow could be intermittent	Indication of absence of flow – note that absence of flow can be determined when process is not operating using simulated flow	Episodic	Date and time when flow stops during process operation and when flow begins after stopping during process operation	Time period between flow stop and start.

For these control devices, you must monitor these operating parameters ...	Establish the following operating limit during your initial performance test ...	Monitor, record, and demonstrate continuous compliance using these minimum frequencies		
		Data measurement	Data recording	Data averaging period for compliance
* * *	* * *	* * *		
Regeneration stream flow	Minimum total flow per regeneration cycle	Continuous	Every 15 minutes	Total flow for each regeneration cycle.
Adsorber bed temperature	Maximum temperature	Continuously after regeneration and within 15 minutes of completing any temperature regulation	Every 15 minutes after regeneration and within 15 minutes of completing any temperature regulation	3-hour block average.
Adsorber bed temperature	Minimum temperature	Continuously during regeneration except during any temperature regulating portion of the regeneration cycle	Every 15 minutes during regeneration cycle	Average of regeneration cycle.
Vacuum and duration of regeneration	Minimum vacuum and period of time for regeneration	Continuous	Every 15 minutes during regeneration cycle	Average vacuum and duration of regeneration.
Regeneration frequency	Minimum regeneration frequency and duration	Continuous	Date and time of regeneration start and stop	Date and time of regeneration start and stop.
Adsorber operation valve sequencing and cycle time	Correct valve sequencing and minimum cycle time	Daily	Daily	Daily
* * *	* * *	* * *		
Average adsorber bed life	Adsorber bed change-out time [N/A for initial performance test]	Daily until breakthrough for three adsorber bed change-outs	Outlet VOC concentration	Average time for three adsorber bed change-outs
Outlet VOC concentration of the first adsorber bed in series	Limits in Table 1, 1b, 2, or 2b of this subpart	Daily, except monthly (if more than 2 months bed life remaining) or weekly (if more than 2	Outlet VOC concentration	Daily, weekly, or monthly.

<b>For these control devices, you must monitor these operating parameters ...</b>	<b>Establish the following operating limit during your initial performance test ...</b>	<b>Monitor, record, and demonstrate continuous compliance using these minimum frequencies</b>		
		<b>Data measurement</b>	<b>Data recording</b>	<b>Data averaging period for compliance</b>
		weeks bed life remaining)		
* * *	* * *	* * *	* * *	* * *

39. Table 8 to subpart HHHHHHH of part 63 amended by revising the heading to the first column and row 6.c to read as follows:

TABLE 8 TO SUBPART HHHHHHH OF PART 63—METHODS AND PROCEDURES FOR CONDUCTING PERFORMANCE TESTS FOR PROCESS VENTS

<b>For each control device used to meet the emission limit in Table 1, 1b, 2, or 2b to this subpart for the following pollutant ...</b>	<b>You must ...</b>	<b>Using ...</b>
* * *	* * *	* * *
6. Any pollutant from a continuous, batch, or combination of continuous and batch process vent(s)	* * *	* *
	c. Conduct gas molecular weight analysis and correct concentrations the specified percent oxygen in Table 1, 1b, 2, or 2b to this subpart	Method 3, 3A, or 3B at 40 CFR part 60, appendix A-2, using the same sampling site and time as HAP samples.
* * *	* * *	* * *

\* \* \*

40. Table 9 to subpart HHHHHHH of part 63 is amended by revising rows 3 and 4 to read as follows:

**TABLE 9 TO SUBPART HHHHHHHH OF PART 63—PROCEDURES FOR CONDUCTING SAMPLING OF STRIPPED RESIN AND PROCESS WASTEWATER**

For demonstrating . . .	For the following emission points and types of processes . . .	Collect samples according to the following schedule . . .	
		Vinyl chloride . . .	Total non-vinyl chloride organic HAP . . .
*   *   *	*   *   *		
3. Initial compliance	N/A	1 grab or composite sample	1 grab or composite sample.
4. Continuous compliance	N/A	1 grab or composite sample per month	1 grab or composite sample per month.

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