Citation	Subject	Applies to subpart EEEEEEE	Explanation
§ 63.10(b)(2)(i)–(v), (d)(5)	Recordkeeping/Reporting Associated with SSM.	No.	
§ 63.10(c)(2)–(c)(4), (c)(9)	Reserved	No.	
§ 63.11	Control Device Requirements	No.	
§ 63.12	State Authority and Delegations.	Yes.	
§§ 63.13–63.16	Addresses, Incorporation by Reference, Availability of Information, Performance Track Provisions.	Yes.	

Subparts FFFFFFF and GGGGGGG [Reserved]

Subpart HHHHHHH—National Emission Standards for Hazardous Air Pollutant Emissions for Polyvinyl Chloride and Copolymers Production

SOURCE: 77 FR 22906, Apr. 17, 2012, unless otherwise noted.

WHAT THIS SUBPART COVERS

§ 63.11860 What is the purpose of this subpart?

This subpart establishes national emission standards for hazardous air pollutants emitted from the production of polyvinyl chloride and copolymers at major sources. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission standards.

§ 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, 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.

§ 63.11870 What is the affected source of this subpart?

(a) This subpart applies to each polyvinyl chloride and copolymers production affected source.

(b) The polyvinyl chloride and copolymers production affected source is the facility wide collection of PVCPU, storage vessels, heat exchange systems, surge control vessels, wastewater and process wastewater treatment systems that are associated with producing polyvinyl chloride and copolymers.

(c) An existing affected source is one for which construction was commenced on or before May 20, 2011, at a major source.

(d) A new affected source is one for which construction is commenced after May 20, 2011, at a major source.

(e) If components of an existing affected source are replaced such that the replacement meets the definition of reconstruction in § 63.2 and the reconstruction commenced after May 20, 2011, then the existing affected source becomes a reconstructed source and is subject to the relevant standards for a new affected source. The reconstructed source must comply with the requirements for a new affected source upon initial startup of the reconstructed source or by April 17, 2012, whichever is later.

§ 63.11871 What is the relationship to 40 CFR part 61, subpart F?

After the applicable compliance date specified in § 63.11875(a), (b) or (c), an affected source that is also subject to the provisions of 40 CFR part 61, subpart F, is required to comply with the provisions of this subpart and no longer has to comply with 40 CFR part 61, subpart F.

§ 63.11872 What is the relationship to other subparts in this part?

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.

§ 63.11875 When must I comply with this subpart?

(a) If you own or operate an existing affected source, you must achieve compliance with the applicable provisions in this subpart no later than April 17, 2015. On or after April 17, 2015, any such existing affected source is no longer subject to the provisions of 40 CFR part 61, subpart F.

(b) If you start up a new affected source on or before April 17, 2012, you must achieve compliance with the provisions of this subpart no later than April 17, 2012. On or after April 17, 2012, any such new affected source is not subject to the provisions of 40 CFR part 61, subpart F.

(c) If you start up a new affected source after April 17, 2012, you must achieve compliance with the provisions of this subpart upon startup of your affected source. Upon startup, any such new affected source is not subject to the provisions of 40 CFR part 61, subpart F.

(d) You must meet the notification requirements in §§ 63.9 and 63.11985 according to the dates specified in those sections. Some of the notifications must be submitted before you are required to comply with the emission limits and standards in this subpart.

EMISSION LIMITS, OPERATING LIMITS AND WORK PRACTICE STANDARDS

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

(a) 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.

(b) You must establish an operating limit for each operating parameter required to be monitored in § 63.11925, and you must establish each operating limit as an operating range, minimum operating level or maximum operating level. You must comply with each established operating limit.

(c) You must comply with the emission limits and standards specified in §§ 63.11910 through 63.11980 that apply to your affected source.

GENERAL COMPLIANCE REQUIREMENTS

§ 63.11885 What parts of the General Provisions apply to me?

Table 4 to this subpart specifies which parts of the General Provisions in subpart A of this part apply to you.

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

(a) The emission limits, operating limits and work practice standards specified in this subpart apply at all times, including periods of startup, shutdown or malfunction.

(b) At all times, you must operate and maintain your affected source, including associated air pollution control components and monitoring system components, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether acceptable operation and maintenance procedures are being used will be based on information available to the Administrator, which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(c) You must install, calibrate, maintain, and operate all monitoring system components according to §§ 63.8, 63.11935(b) and (c), and paragraphs (c)(1) and (2) of this section.

(1) Except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments), you must operate the continuous monitoring system

at all times the affected source is operating. A monitoring system malfunction is any sudden, infrequent, not reasonably preventable failure of the monitoring system to provide data. Monitoring system failures that are caused in part by poor maintenance or careless operation are not malfunctions. You are required to complete monitoring system repairs in response to monitoring system malfunctions and to return the monitoring system to operation as expeditiously as practicable.

(2) You may not use data recorded during monitoring system malfunctions, repairs associated with monitoring system malfunctions, or required monitoring system quality assurance or control activities in calculations used to report emissions or operating levels. You must use all the data collected during all other required data collection periods in assessing the operation of the control device and associated control system. You must report any periods for which the monitoring system failed to collect required data.

(d) A deviation means any of the cases listed in paragraphs (d)(1) through (7) of this section.

(1) Any instance in which an affected source subject to this subpart, or an owner or operator of such a source, fails to meet any requirement or obligation established by this subpart, including, but not limited to, any emission limit, operating limit or work practice standard.

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

(4) When the average value of a monitored operating parameter, based on the data averaging period for compliance specified in Table 5 to this subpart, does not meet the operating limit established in §63.11880(b).

(5) When an affected source discharges directly to the atmosphere from any of the sources specified in paragraphs (d)(5)(i) through (iv) of this section.

(i) A pressure relief device, as defined in §63.12005.

(ii) A bypass, as defined in §63.12005.

(iii) A closed vent system in vacuum service.

(iv) A closure device on a pressure vessel.

(6) Any instance in which the affected source subject to this subpart, or an owner or operator of such a source, fails to meet any term or condition specified in paragraph (d)(6)(i) or (ii) of this section.

(i) Any term or condition that is adopted to implement an applicable requirement in this subpart.

(ii) Any term or condition relating to compliance with this subpart that is included in the operating permit for any affected source required to obtain such a permit.

(7) Any failure to collect required data, except for periods of monitoring system malfunctions, repairs associated with monitoring system malfunctions, and required monitoring system quality assurance or quality control activities (including, as applicable, calibration checks and required zero and span adjustments).

§63.11895 How do I assert an affirmative defense for exceedance of emission standard during malfunction?

In response to an action to enforce the standards set forth in §63.11880, you may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at 40 CFR 63.2. Appropriate penalties may be assessed, however, if you fail to meet your burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(a) Evidence. To establish the affirmative defense in any action to enforce such a standard, you must timely meet the notification requirements in paragraph (b) of this section, and must prove by a preponderance of evidence that:

(1) The violation:

(i) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring

equipment, process equipment, or a process to operate in a normal or usual manner.

(ii) Could not have been prevented through careful planning, proper design or better operation and maintenance practices.

(iii) Did not stem from any activity or event that could have been foreseen and avoided, or planned for.

(iv) Were not part of a recurring pattern indicative of inadequate design, operation or maintenance.

(2) Repairs were made as expeditiously as possible when violation occurred. Off-shift and overtime labor were used, to the extent practicable to make these repairs.

(3) The frequency, amount and duration of the violation (including any bypass) were minimized to the maximum extent practicable.

(4) If the violation resulted from a bypass of control equipment or a process, then the bypass was unavoidable to prevent loss of life, personal injury, or severe property damage.

(5) All possible steps were taken to minimize the impact of the violations on ambient air quality, the environment and human health.

(6) All emissions monitoring and control systems were kept in operation if at all possible, consistent with safety and good air pollution control practices.

(7) All of the actions in response to the violations were documented by properly signed, contemporaneous operating logs.

(8) At all times, the affected source was operated in a manner consistent with good practices for minimizing emissions.

(9) A written root cause analysis has been prepared, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the violations resulting from the malfunction event at issue. The analysis shall also specify, using best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(b) Report. The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator in the compliance report required by § 63.11985(b) with all necessary supporting documentation, that it has met the requirements set forth in this section.

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

If you make a process change to an existing affected source that does not meet the criteria to become a new affected source in § 63.11870(d), you must comply with the requirements in paragraph (a) of this section and the testing and reporting requirements in paragraphs (c) and (d) of this section. If you make a process change to a new affected source, you must comply with the requirements in paragraph (b) of this section and the testing and reporting requirements in paragraphs (c) and (d) of this section. Refer to § 63.12005 for the definition of process changes.

(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 start-up 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 all changed emission points are 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.

(c) For process changes, you must demonstrate continuous compliance with your emission limits and standards, operating limits, and work practice standards according to the procedures and frequency in §§ 63.11910 through 63.11980.

(d) For process changes, you must submit the report specified in § 63.11985(b)(4)(iii).

TESTING AND COMPLIANCE REQUIREMENTS

§ 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 Tables 1 and 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).

(b) For existing 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).

(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 Tables 2 and 3 to this subpart, as applicable, no later than 180 days after the effective date of publication of the final rule in the FEDERAL REGISTER 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 startup date of the affected source or the effective date of publication of the final rule in the FEDERAL REGISTER, whichever is later, and according to the applicable provisions in § 63.7(a)(2).

(e) If you demonstrate initial compliance using a performance test and a force majeure is about to occur, occurs, or has occurred for which you intend to assert a claim of force majeure, then you must follow the procedures in § 63.7(a)(4).

§ 63.11905 When must I conduct subsequent performance testing and monitoring to demonstrate continuous compliance?

Following the date of your initial demonstration of compliance in § 63.11900, you must conduct subsequent performance testing and monitoring to demonstrate continuous compliance with your emission limits, operating limits, and work practice standards according to the procedures and frequency in §§ 63.11910 through 63.11980. If you make a process change as specified in § 63.11896, such that a different emission limit or operating parameter limit applies, you must conduct a performance test according to § 63.11896.

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

You must comply with the requirements specified in Table 3 to this subpart for each storage vessel in HAP service.

(a) 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. If you elect to use a fixed roof storage vessel vented to a closed vent system and control device, the closed vent system and control device must meet the requirements in §§ 63.11925 through 63.11950.

(1) *Design requirements.* (i) The fixed roof must be installed in a manner such that there are no visible cracks, holes, gaps, or other open spaces between roof section joints or between the interface of the roof edge and the tank wall.

(ii) Each opening in the fixed roof must be equipped with a 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) *Operating requirements.* (i) Except as specified in paragraph (a)(2)(ii) of this section, the fixed roof must be installed with each closure device secured in the closed position.

(ii) Opening of closure devices or removal of the fixed roof is allowed under 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.

(B) A conservation vent that vents to the atmosphere is allowed during normal operations 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.

(iii) During periods of planned routine maintenance of a control device, operate the storage vessel in accordance with paragraphs (a)(2)(iii)(A) and (B) of this section. You must keep the records specified in §63.11990(b)(6).

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

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

(3) *Inspection and monitoring requirements.* (i) Visually inspect the fixed roof and its closure devices for defects initially and at least once per calendar year except as specified in paragraph (a)(3)(ii) of this section. Defects include, but are not limited to, visible cracks, holes, or gaps in the roof sections or between the roof and the wall of the storage vessel; broken, cracked or otherwise damaged seals, or gaskets on closure devices; and broken or missing hatches, access covers, caps or other closure devices.

(ii) The inspection requirement specified in paragraph (a)(3)(i) of this section does not apply to parts of the fixed roof that you determine are unsafe to inspect because operating personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (a)(3)(i) of this section, provided you comply with the requirements specified in paragraphs (a)(3)(ii)(A) and (B) of this section.

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

(B) You 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. You must maintain a copy of the written plan and schedule at the plant site.

(4) *Repair requirements.* (i) Complete repair of a defect as soon as possible, but no later than 45 days after detection. You must comply with the requirements in this paragraph (a)(4)(i) except as provided in paragraph (a)(4)(ii) of this section.

(ii) Repair of a defect may be delayed beyond 45 days if you determine that repair of the defect requires emptying or temporary removal from service of the storage vessel and no alternative storage capacity is available at the site to accept the removed material. In this case, repair the defect the next time alternative storage capacity becomes available and the storage vessel can be emptied or temporarily removed from service.

(b) If you elect to use an internal floating roof storage vessel or external floating roof storage vessel to comply with the requirements specified in Table 3 to this subpart, you must meet all requirements of §§63.1060 through 63.1067 of subpart WW of this part for internal floating roof storage vessels or external floating roof storage vessels, as applicable.

(c) 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) Whenever the pressure vessel is in hazardous air pollutants (HAP) service, you must operate the pressure vessel as a closed system that does not vent to the atmosphere, e.g., during filling, emptying and purging. The vent stream during filling, emptying and

purging must meet the requirements of § 63.11925(a) and (b).

(2) Each opening in the pressure vessel must be equipped with a 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.

(3) All potential leak interfaces must be monitored annually for leaks using the procedures specified in § 63.11915 and you may adjust for background concentration. You must comply with the recordkeeping provisions specified in § 63.11990(b)(4) and the reporting provisions specified in § 63.11985(a)(1), (b)(1), and (b)(10).

(4) Pressure vessel closure devices must not discharge to the atmosphere. Any such release (e.g., leak) constitutes a violation of this rule. You must submit to the Administrator as part of your compliance report the information specified in § 63.11985(b)(10). This report is required even if you elect to follow the procedures specified in § 63.11895 to establish an affirmative defense.

§ 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 (c) of this section.

(a) Requirement for certain equipment in subpart UU of this part. You must comply with §§ 63.1020 through 63.1025, 63.1027, 63.1029 through 63.1032, and 63.1034 through 63.1039 of subpart UU of this part.

(b) Requirements for pumps, compressors, and agitators. You must meet the requirements of paragraphs (b)(1) and (2) of this section. For each type of equipment specified in paragraphs (b)(1) and (2) of this section, you must also meet the requirements of paragraph (a) of this section.

(1) Rotating pumps. HAP emissions from seals on all rotating pumps in HAP service are to be minimized by either installing sealless pumps, pumps with double mechanical seals or equivalent equipment, or by complying with the requirements of 40 CFR part 63, subpart UU for rotating pumps. If double mechanical seals are used, emissions from the seals are to be minimized by maintaining the pressure between the two seals so that any leak that occurs is into the pump; by complying with § 63.11925(a) and (b); or equivalent equipment or procedures approved by the Administrator.

(2) Reciprocating pumps, rotating compressors, reciprocating compressors and agitators. HAP emissions from seals on all reciprocating pumps, rotating compressors, reciprocating compressors and agitators in HAP service are to be minimized by either installing double mechanical seals or equivalent equipment, or by complying with the requirements of 40 CFR part 63, subpart UU for reciprocating pumps, rotating compressors, reciprocating compressors and/or agitators. If double mechanical seals are used, HAP emissions from the seals are to be minimized by maintaining the pressure between the two seals so that any leak that occurs is into the pump; by complying with § 63.11925(a) and (b); or equivalent equipment or procedures approved by the Administrator.

(c) Requirements for pressure relief devices. For pressure relief devices in HAP service, as defined in § 63.12005, you must meet the requirements of this paragraph (c) and paragraph (a) of this section, you must comply with the recordkeeping provisions in § 63.11990(c), and you must comply with the reporting provisions 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 or 2 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 or 2 to this subpart, constitutes a violation of this rule. 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 in such a way that it will indicate when an emission release has occurred.

(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). This report is required even if you elect to follow the procedures specified in § 63.11895 to establish an affirmative defense.

(2) For 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, and are required to meet process vent emission limits in Table 1 or 2 to this subpart. Any release to the atmosphere without meeting the process vent emission limits in Table 1 or 2 to this subpart, constitutes a violation of this rule. 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). This report is required even if you elect to follow the procedures specified in § 63.11895(b) to establish an affirmative defense.

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

(a) Except as provided in paragraph (b) of this section, you must perform monitoring to identify leaks of volatile organic compounds from each heat exchange system in HAP service subject to the requirements of this subpart according to the procedures in paragraphs (a)(1) through (4) of this section.

(1) *Monitoring locations for closed-loop recirculation heat exchange systems.* For each closed loop recirculating heat exchange system, you must collect and analyze a sample from the location(s) described in either paragraph (a)(1)(i) or (ii) of this section.

(i) Each cooling tower return line prior to exposure to air for each heat exchange system in HAP service.

(ii) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers within a heat exchange system is covered by the selected monitoring location(s).

(2) *Monitoring locations for once-through heat exchange systems.* For each once-through heat exchange system, you must collect and analyze a sample from the location(s) described in paragraph (a)(2)(i) of this section. You may also elect to collect and analyze an additional sample from the location(s) described in paragraph (a)(2)(ii) of this section.

(i) Selected heat exchanger exit line(s) so that each heat exchanger or group of heat exchangers in HAP service within a heat exchange system is covered by the selected monitoring location(s).

(ii) The inlet water feed line for a once-through heat exchange system prior to any heat exchanger. If multiple heat exchange systems use the same water feed (i.e., inlet water from the same primary water source), you may monitor at one representative location and use the monitoring results for that sampling location for all heat exchange systems that use that same water feed.

(3) *Monitoring method.* You must determine the total strippable volatile organic compounds concentration or vinyl chloride concentration at each monitoring location using one of the analytical methods specified in paragraphs (a)(3)(i) through (iii) of this section.

(i) Determine the total strippable volatile organic compounds concentration (in parts per million by volume) as methane from the air stripping testing system using Modified El Paso Method (incorporated by reference, see § 63.14) using a flame ionization detector analyzer.

(ii) Determine the total strippable volatile organic compounds concentration (in parts per billion by weight) in the cooling water using Method 624 at 40 CFR part 136, appendix A. The target

list of compounds shall be generated based on a pre-survey sample and analysis by gas chromatography/mass spectrometry and process knowledge to include all compounds that can potentially leak into the cooling water. If Method 624 of part 136, appendix A is not applicable for all compounds that can potentially leak into the cooling water for a given heat exchange system, you cannot use this monitoring method for that heat exchange system.

(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 A.

(4) *Monitoring frequency*. You must determine the total strippable volatile organic compounds or vinyl chloride concentration at each monitoring location at the frequencies specified in paragraphs (a)(4)(i) and (ii) of this section.

(i) For heat exchange systems for which you have not delayed repair of any leaks, monitor at least monthly. You may elect to monitor more frequently than the minimum frequency specified in this paragraph.

(ii) If you elect to monitor the inlet water feed line for a once-through heat exchange system as provided in paragraph (a)(2)(ii) of this section, you must monitor the inlet water feed line at the same frequency used to monitor the heat exchange exit line(s), as required in paragraph (a)(2)(i) of this section.

(b) A heat exchange system is not subject to the monitoring requirements in paragraph (a) of this section if it meets any one of the criteria in paragraphs (b)(1) through (3) of this section.

(1) All heat exchangers that are in HAP service within the heat exchange system operate with the minimum pressure on the cooling water side at least 35 kilopascals greater than the maximum pressure on the process side.

(2) The heat exchange system does not contain any heat exchangers that are in HAP service.

(3) The heat exchange system has a maximum cooling water flow rate of 10 gallons per minute or less.

(c) The leak action levels for both existing and new sources are specified in paragraphs (c)(1) through (3) of this section.

(1) If you elect to monitor your heat exchange system by using the monitoring method specified in paragraph (a)(3)(i) of this section, then the leak action level is a total strippable volatile organic compounds concentration (as methane) in the stripping gas of 3.9 parts per million by volume.

(2) If you elect to monitor your heat exchange system by using the monitoring method specified in paragraph (a)(3)(ii) of this section, then the leak action level is a total strippable volatile organic compounds concentration in the cooling water of 50 parts per billion by weight.

(3) If you elect to monitor your heat exchange system by using the monitoring method specified in paragraph (a)(3)(iii) of this section, then the leak action level is a vinyl chloride concentration in the cooling water of 50 parts per billion by weight.

(d) A leak is defined as specified in paragraph (d)(1) or (2) of this section, as applicable.

(1) For once-through heat exchange systems for which you monitor the inlet water feed, as described in paragraph (a)(2)(ii) of this section, a leak is detected if the difference in the measurement value of the sample taken from a location specified in paragraph (a)(2)(i) of this section and the measurement value of the corresponding sample taken from the location specified in paragraph (a)(2)(ii) of this section equals or exceeds the leak action level.

(2) For all other heat exchange systems, a leak is detected if a measurement value taken according to the requirements in paragraph (a) of this section equals or exceeds the leak action level.

(e) If a leak is detected, you must repair the leak to reduce the measured concentration to below the applicable action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraphs (f) and (g) of this section. Repair includes re-monitoring as specified in paragraph (a) of this section to verify that the measured concentration is below the applicable action level.

Actions that you can take to achieve repair include but are not limited to:

(1) Physical modifications to the leaking heat exchanger, such as welding the leak or replacing a tube;

(2) Blocking the leaking tube within the heat exchanger;

(3) Changing the pressure so that water flows into the process fluid;

(4) Replacing the heat exchanger or heat exchanger bundle; or

(5) Isolating, bypassing or otherwise removing the leaking heat exchanger from service until it is otherwise repaired.

(f) If you detect a leak when monitoring a cooling tower return line or heat exchanger exit line under paragraph (a) of this section, you may conduct additional monitoring following the requirements in paragraph (a) of this section to further isolate each heat exchanger or group of heat exchangers in HAP service within the heat exchange system for which the leak was detected. If you do not detect any leaks when conducting additional monitoring for each heat exchanger or group of heat exchangers, the heat exchange system is excluded from repair requirements in paragraph (e) of this section.

(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 repair action level, you may delay the repair of a leaking heat exchanger only if one of the conditions in paragraphs (g)(1) or (2) of this section is met. If you exceed the 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.

(1) If the repair is technically infeasible without a shutdown and the total strippable volatile organic compounds or vinyl chloride concentration is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair, you may delay repair until the next scheduled shutdown of the heat exchange system. If, during subsequent monitoring, the total strippable volatile organic compounds or vinyl chloride concentration is equal to or greater than the delay of repair action level, you must repair the leak within 30 days of the monitoring event in which the total strippable volatile organic compounds or vinyl chloride concentration was equal to or exceeded the delay of repair action level.

(2) If the necessary equipment, parts, or personnel are not available and the total strippable volatile organic compounds or vinyl chloride concentration is initially and remains less than the delay of repair action level for all monitoring periods during the delay of repair, you may delay the repair for a maximum of 120 days from the day the leak was first identified. You must demonstrate that the necessary equipment, parts or personnel were not available. If, during subsequent monthly monitoring, the total strippable volatile organic compounds or vinyl chloride concentration is equal to or greater than the delay of repair action level, you must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the total strippable volatile organic compounds or vinyl chloride delay of repair action level.

(h) To delay the repair under paragraph (g) of this section, you must record the information in paragraphs (h)(1) through (4) of this section.

(1) The reason(s) for delaying repair.

(2) A schedule for completing the repair as soon as practical.

(3) The date and concentration of the leak as first identified and the results of all subsequent monitoring events during the delay of repair.

(4) An estimate of the potential emissions from the leaking heat exchange system following the procedures in paragraphs (h)(4)(i) and (ii) of this section.

(i) Determine the total strippable volatile organic compounds or vinyl chloride concentration in the cooling water, in parts per billion by weight. If the Modified El Paso Method is used, calculate the total strippable volatile

organic compounds concentration in the cooling water using equation 7–1 from Modified El Paso Method (incorporated by reference, see § 63.14) and the total strippable volatile organic compounds concentration measured in the stripped air.

(ii) Calculate the emissions for the leaking heat exchange system by multiplying the volatile organic compounds or vinyl chloride concentration in the cooling water, ppbw, by the flow rate of the cooling water at the selected monitoring location and by the expected duration of the delay according to Equation 1 of this section. The flow rate may be based on direct measurement, pump curves, heat balance calculations or other engineering methods.

$$E_L = (C_{VC})(10^{-9})(V_{CW})(\rho_{CW})(60)(D_{delay}) \qquad \text{(Eq. 1)}$$

Where:

E_L = Emissions from leaking heat exchange system, pounds of volatile organic compounds or vinyl chloride.

C_{VC} = Actual measured concentration of total strippable volatile organic compounds or vinyl chloride measured in the cooling water, parts per billion by weight (ppbw).

V_{CW} = Total volumetric flow rate of cooling water, gallons per minute (gpm).

ρ_{CW} = Density of cooling water, pounds per gallon (lb/gal).

D_{delay} = Expected duration of the repair delay, days.

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

Each process vent must meet the requirements of paragraphs (a) through (h) of this section.

(a) *Emission limits.* Each process vent must meet the emission limits in Table 1 or 2 to this subpart prior to the vent stream being exposed to the atmosphere. The emission limits in Table 1 or 2 to this subpart apply at all times. The emission limits in Table 1 or 2 to this subpart must not be met through dilution.

(b) *Closed vent systems and control devices.* Each batch process vent, continuous process vent and miscellaneous vent 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 or 2 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 or 2 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 or 2 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), upon promulgation of a performance specification for hydrogen chloride CEMS, 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.

(2) Dioxin/furan 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), upon promulgation of a performance specification for dioxin/furan CEMS, new and

existing sources have the option to install a dioxin/furan CEMS to demonstrate initial and continuous compliance with the dioxins/furan emission limit for process vents, as specified in paragraphs (d) and (e) of this section.

(3) Total hydrocarbon 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 affected sources have the option to install a total hydrocarbon CEMS to demonstrate initial and continuous compliance with the total hydrocarbons or total organic HAP 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 or 2 to this subpart, you must comply with paragraphs (d)(1) through (5) of this section.

(1) You must conduct an initial inspection as specified in §63.11930(d) for each closed vent system.

(2) For each CEMS and CPMS required or 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 CEMS and CPMS required or 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 or 2 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 or 2 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 or 2 to this subpart.

(ii) During the performance test specified in paragraph (d)(5)(i) of this section, for each CPMS installed and operated as specified in paragraph (c) of this section, you must establish an operating limit as the operating parameter range, minimum operating parameter level, or maximum operating parameter level specified in §63.11935(d). You must meet the requirements specified in §63.11890(c). Each operating limit must be based on the data averaging period for compliance specified in Table 5 to this subpart using data collected at the minimum frequency specified in §63.11935(c)(2) and calculated using the data reduction method specified in §63.11935(e). For a CPMS used on a batch operation, you may use a data averaging period based on an operating block in lieu of the averaging period specified in Table 5 to this subpart.

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

(1) You must meet the requirements in §63.11930 for each closed vent system.

(2) You must operate and maintain each CEMS and CPMS required in paragraph (c) of this section as specified in §63.11935(b) and (c), respectively.

(3) For each emission limit for which you use a CEMS to demonstrate compliance, you must meet the requirements in paragraphs (e)(3)(i) and (ii) of this section.

(i) You must conduct a periodic site-specific CEMS performance evaluation test according to your quality control program and site-specific performance evaluation test plan specified in § 63.11935(b)(1).

(ii) You must demonstrate continuous compliance with the emission limits in Table 1 or 2 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) For each emission limit for which you do not use a CEMS to demonstrate compliance, you must meet the requirements of paragraphs (e)(4)(i) and (ii) of this section.

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

(ii) For each CPMS operated and maintained as specified in paragraph (e)(2) of this section, you must meet the requirements specified in paragraphs (e)(4)(ii)(A) through (C) of this section.

(A) You must conduct periodic site-specific CPMS performance evaluation tests according to your site-specific monitoring plan and § 63.11935(c).

(B) For each control device being monitored, you must continuously collect CPMS data consistent with § 63.11890(c) and your site-specific monitoring plan. You must continuously determine the average value of each monitored operating parameter based on the data collection and reduction methods specified in §§ 63.11935(c)(2) and 63.11935(e), and the applicable data averaging period for compliance specified in Table 5 to this subpart for all periods the process is operating. For a CPMS used on a batch operation, you may use a data averaging period based on an operating block in lieu of the averaging periods specified in Table 5 to this subpart.

(C) You must demonstrate continuous compliance with each operating limit established in paragraph (d)(5)(ii) of this section using these average values calculated in paragraph (e)(4)(ii)(B) of this section.

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

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

(1) Measure the concentration of each dioxin/furan (tetra-through octachlorinated) congener emitted using Method 23 at 40 CFR part 60, appendix A–7.

(2) For each dioxin/furan (tetra-through octachlorinated) congener measured in accordance with paragraph (f)(1) of this section, multiply the congener concentration by its corresponding toxic equivalency factor specified in Table 6 to this subpart.

(3) Sum the products calculated in accordance with paragraph (f)(2) of this section to obtain the total concentration of dioxins/furans emitted in terms of toxic equivalency.

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

(1) For batch process vents, the emissions profile must:

(i) Describe the characteristics of the batch process vent under worst-case conditions.

(ii) Determine emissions per episode and batch process vent emissions according to the procedures specified in § 63.11950.

(2) For continuous process vents, the flow rate and concentration must be determined according to paragraphs (g)(2)(i) through (iii) or according to paragraph (g)(2)(iv):

(i)(A) Method 1 or 1A of 40 CFR part 60, appendix A–1, as appropriate, shall

be used for selection of the sampling site. The sampling site shall be after the last recovery device (if any recovery devices are present) but prior to being combined with any other continuous process vent, batch process vent, or miscellaneous vent, prior to the inlet of any control device that is present and prior to release to the atmosphere.

(B) No traverse site selection method is needed for vents smaller than 0.10 meter in diameter.

(ii) The gas volumetric flow rate shall be determined using Method 2, 2A, 2C or 2D of 40 CFR part 60, appendix A–1, as appropriate.

(iii) (A) Method 18 of 40 CFR part 60, appendix A–6 or Method 25A of 40 CFR part 60, appendix A–7 shall be used to measure concentration; alternatively, any other method or data that has been validated according to the protocol in Method 301 of appendix A of this part may be used.

(B) Where Method 18 of 40 CFR part 60, appendix A–6 is used, the following procedures shall be used to calculate parts per million by volume concentration:

(*1*) The minimum sampling time for each run shall be 1 hour in which either an integrated sample or four grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals in time, such as 15-minute intervals during the run.

(*2*) The concentration of either total organic compounds (TOC) (minus methane and ethane) or organic HAP shall be calculated according to paragraph (g)(2)(iii)(B)(2)(i) or (g)(2)(iii)(B)(2)(ii) of this section as applicable.

(*i*) The TOC concentration (C_{TOC}) is the sum of the concentrations of the individual components and shall be computed for each run using Equation 1 of this section:

$$C_{TOC} = \frac{\sum_{i=1}^{x}\left[\sum_{j=1}^{n} C_{ji}\right]}{X} \qquad \text{(Eq. 1)}$$

Where:

C_{TOC} = Concentration of TOC (minus methane and ethane), dry basis, parts per million by volume.

C_{ji} = Concentration of sample component j of the sample i, dry basis, parts per million by volume.

n = Number of components in the sample.

x = Number of samples in the sample run.

(*ii*) The total organic HAP concentration (CHAP) 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.

(C) Where Method 25A of 40 CFR part 60, appendix A–7 is used, the following procedures shall be used to calculate parts per million by volume TOC concentration:

(*1*) Method 25A of 40 CFR part 60, appendix A–7, shall be used only if a single organic HAP compound is greater than 50 percent of total organic HAP, by volume, in the vent stream.

(*2*) The vent stream composition may be determined by either process knowledge, test data collected using an appropriate EPA method, or a method or data validated according to the protocol in Method 301 of appendix A of this part. Examples of information that could constitute process knowledge include calculations based on material balances, process stoichiometry, or previous test results provided the results are still relevant to the current vent stream conditions.

(*3*) The organic HAP used as the calibration gas for Method 25A of 40 CFR part 60, appendix A–7 shall be the single organic HAP compound present at greater than 50 percent of the total organic HAP by volume.

(*4*) The span value for Method 25A of 40 CFR part 60, appendix A–7 shall be 50 parts per million by volume.

(*5*) Use of Method 25A of 40 CFR part 60, appendix A–7 is acceptable if the response from the high-level calibration gas is at least 20 times the standard deviation of the response from the zero calibration gas when the instrument is zeroed on the most sensitive scale.

(iv) Engineering assessment including, but not limited to, the following:

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

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

(C) Maximum flow rate, TOC emission rate, organic HAP emission rate, or net heating value limit specified or implied within a permit limit applicable to the process vent.

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

(*1*) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations,

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

(*3*) Estimation of TOC or organic HAP concentrations based on saturation conditions,

(*4*) Estimation of maximum expected net heating value based on the vent stream concentration of each organic compound or, alternatively, as if all TOC in the vent stream were the compound with the highest heating value.

(E) All data, assumptions, and procedures used in the engineering assessment shall be documented.

(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 or 2 to this subpart, then you must meet the requirements of § 63.11896.

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

(a) *General.* To route emissions from process vents subject to the emission limits in Table 1 or 2 to this subpart to a control device, you must use a closed vent system and meet the requirements of this section and all provisions referenced 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 the HAP vapors from each continuous process vent, miscellaneous process vent and batch process vent, and to route the collected vapors to a control device.

(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 of this rule. 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.

(1) *Bypass flow indicator.* Install, maintain, and operate a flow indicator as specified in paragraphs (c)(1)(i) through (iv) of this section.

(i) The flow indicator must be properly installed at the entrance to any bypass.

(ii) The flow indicator must be equipped with an alarm system that will alert an operator immediately, and automatically when flow is detected in the bypass. The alarm must be located such that the alert is detected and recognized easily by an operator.

(iii) If the alarm is triggered, you must immediately initiate procedures to identify the cause of the alarm. If

any closed vent system has discharged to the atmosphere through a vent or bypass, you must initiate procedures to stop the bypass discharge.

(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). This report is required even if you elect to follow the procedures specified in §63.11895 to establish an affirmative defense and submit the reports specified in §63.11985(b)(11).

(2) *Bypass valve configuration.* Secure the bypass valve in the non-diverting position with a car-seal or a lock-and-key type configuration.

(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 from the emission limits in Table 1 or 2 to this subpart. You must maintain the records specified in paragraph (g)(1)(ii) of this section.

(ii) For each seal or closure mechanism, you must comply with either paragraph (c)(2)(ii)(A) or (B) of this section.

(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). This report is required even if you elect to follow the procedures specified in §63.11895 to establish an affirmative defense and submit the reports specified in §63.11985(b)(11).

(B) You must install, maintain, and operate a bypass flow indicator as specified in paragraphs (c)(1)(i) and (ii) of this section and you must meet the requirements in paragraph (c)(1)(iii) and (iv) of this section for each instance that the flow indicator alarm is triggered.

(d) *Closed vent system inspection and monitoring requirements.* Except as provided in paragraph (d)(3) of this section, you must inspect each closed vent system as specified in paragraph (d)(1) or (2) of this section.

(1) *Hard-piping inspection.* If the closed vent system is constructed of hard-piping, you must comply with the requirements specified in paragraphs (d)(1)(i) and (ii) of this section.

(i) Conduct an initial inspection according to the procedures in paragraph (e) of this section.

(ii) Conduct annual inspections for visible, audible, or olfactory indications of leaks.

(2) *Ductwork inspection.* If the closed vent system is constructed of ductwork, you must conduct initial and annual inspections according to the procedures in paragraph (e) of this section.

(3) *Equipment that is unsafe to inspect.* You may designate any parts of the closed vent system as unsafe to inspect if you determine that personnel would be exposed to an immediate danger as a consequence of complying with the initial and annual closed vent system inspection requirements of this subpart.

(e) *Closed vent system inspection procedures.* Except as provided in paragraph (e)(4) of this section, you must comply with all provisions of paragraphs (e)(1) through (3) of this section.

(1) *General.* Inspections must be performed during periods when HAP is being collected by or vented through the closed vent system. A leak is indicated by an instrument reading greater than 500 parts per million by volume above background or by visual inspection.

(2) *Inspection procedures.* Each closed vent system subject to this paragraph (e)(2) must be inspected according to the procedures specified in paragraphs (e)(2)(i) through (vii) of this section.

(i) Inspections must be conducted in accordance with Method 21 at 40 CFR part 60, appendix A–7, except as otherwise specified in this section.

(ii) Except as provided in paragraph (e)(2)(iii) of this section, the detection instrument must meet the performance criteria of Method 21 at 40 CFR part 60, appendix A–7, except the instrument response factor criteria in section 8.1.1.2 of Method 21 must be for the representative composition of the process fluid and not of each individual volatile organic compound in the stream. For process streams that contain nitrogen, air, water or other inerts that are not organic HAP or volatile organic

compound, the representative stream response factor must be determined on an inert-free basis. You may determine the response factor at any concentration for which you will monitor for leaks.

(iii) If no instrument is available at the plant site that will meet the performance criteria of Method 21 at 40 CFR part 60, appendix A–7 specified in paragraph (e)(2)(ii) of this section, the instrument readings may be adjusted by multiplying by the representative response factor of the process fluid, calculated on an inert-free basis as described in paragraph (e)(2)(ii) of this section.

(iv) The detection instrument must be calibrated before use on each day of its use by the procedures specified in Method 21 at 40 CFR part 60, appendix A–7.

(v) Calibration gases must be as specified in paragraphs (e)(2)(v)(A) through (D) of this section.

(A) Zero air (less than 10 parts per million by volume hydrocarbon in air).

(B) Mixtures of methane in air at a concentration less than 10,000 parts per million by volume. A calibration gas other than methane in air may be used if the instrument does not respond to methane or if the instrument does not meet the performance criteria specified in paragraph (e)(2)(ii) of this section. In such cases, the calibration gas may be a mixture of one or more of the compounds to be measured in air.

(C) If the detection instrument's design allows for multiple calibration scales, then the lower scale must be calibrated with a calibration gas that is no higher than 2,500 parts per million by volume.

(D) Perform a calibration drift assessment, at a minimum, at the end of each monitoring day. Check the instrument using the same calibration gas(es) that were used to calibrate the instrument before use. Follow the procedures specified in Method 21 at 40 CFR part 60, appendix A–7, section 10.1, except do not adjust the meter readout to correspond to the calibration gas value. Record the instrument reading for each scale used as specified in paragraph (g)(4) of this section. Divide these readings by the initial calibration values for each scale and multiply by 100 to express the calibration drift as a percentage. If any calibration drift assessment shows a negative drift of more than 10 percent from the initial calibration value, then all equipment monitored since the last calibration with instrument readings below the appropriate leak definition and above the leak definition multiplied by the value specified in paragraph (e)(2)(v)(D)(*1*) of this section must be re-monitored. If any calibration drift assessment shows a positive drift of more than 10 percent from the initial calibration value, then, at your discretion, all equipment since the last calibration with instrument readings above the appropriate leak definition and below the leak definition multiplied by the value specified in paragraph (e)(2)(v)(D)(*2*) of this section may be re-monitored.

(*1*) 100 minus the percent of negative drift, divided by 100.

(*2*) 100 plus the percent of positive drift, divided by 100.

(vi) You may elect to adjust or not adjust instrument readings for background. If you elect not to adjust readings for background, all such instrument readings must be compared directly to 500 parts per million by volume to determine whether there is a leak. If you elect to adjust instrument readings for background, you must measure background concentration using the procedures in this section. You must subtract the background reading from the maximum concentration indicated by the instrument.

(vii) If you elect to adjust for background, the arithmetic difference between the maximum concentration indicated by the instrument and the background level must be compared with 500 parts per million by volume for determining whether there is a leak.

(3) *Instrument probe.* The instrument probe must be traversed around all potential leak interfaces as described in Method 21 at 40 CFR part 60, appendix A–7.

(4) *Unsafe-to-inspect written plan requirements.* For equipment designated as unsafe to inspect according to the provisions of paragraph (d)(3) of this section, you must maintain and follow a written plan that requires inspecting

the equipment as frequently as practical during safe-to-inspect times, but not more frequently than the annual inspection schedule otherwise applicable. You must still repair unsafe-to-inspect equipment according to the procedures in paragraph (f) of this section if a leak is detected.

(f) *Closed vent system leak repair provisions.* The provisions of this paragraph (f) apply to closed vent systems collecting HAP from an affected source.

(1) *Leak repair general for hard-piping.* If there are visible, audible, or olfactory indications of leaks at the time of the annual visual inspections required by paragraph (d)(1)(ii) of this section, you must follow the procedure specified in either paragraph (f)(1)(i) or (ii) of this section.

(i) You must eliminate the leak.

(ii) You must monitor the equipment according to the procedures in paragraph (e) of this section and comply with the leak repair provisions in paragraph (f)(2) of this section.

(2) *Leak repair schedule.* Leaks must be repaired as soon as practical, except as provided in paragraph (f)(3) of this section.

(i) A first attempt at repair must be made no later than 5 days after the leak is detected.

(ii) Except as provided in paragraph (f)(3) of this section, repairs must be completed no later than 15 days after the leak is detected or at the beginning of the next introduction of vapors to the system, whichever is later.

(3) *Delay of repair.* Delay of repair of a closed vent system for which leaks have been detected is allowed if repair within 15 days after a leak is detected is technically infeasible or unsafe without a closed vent system shutdown or if you determine that emissions resulting from immediate repair would be greater than the emissions likely to result from delay of repair. Repair of such equipment must be completed as soon as practical, but not later than the end of the next closed vent system shutdown.

(g) *Closed vent system records.* For closed vent systems, you must record the information specified in paragraphs (g)(1) through (5) of this section, as applicable.

(1) *Bypass records.* For each closed vent system that contains a bypass that could divert a vent stream away from the control device and to the atmosphere, or cause air intrusion into the control device, you must keep a record of the information specified in either paragraph (g)(1)(i) or (ii) of this section, as applicable.

(i) You must maintain records of any alarms triggered because flow was detected in the bypass, including the date and time the alarm was triggered, the duration of the flow in the bypass, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(ii) Where a seal mechanism is used to comply with paragraph (c)(2) of this section, hourly records of flow are not required. In such cases, you must record that the monthly visual inspection of the seals or closure mechanisms has been done, and must record the occurrence of all periods when the seal mechanism is broken, the bypass valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken.

(2) *Inspection records.* For each instrumental or visual inspection conducted in accordance with paragraph (d)(1) or (2) of this section for closed vent systems collecting HAP from an affected source during which no leaks are detected, you must record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(3) *Leak records.* When a leak is detected from a closed vent system collecting HAP from an affected source, the information specified in paragraphs (g)(3)(i) through (vi) of this section must be recorded and kept for 5 years.

(i) The instrument and the equipment identification number and the operator name, initials, or identification number.

(ii) The date the leak was detected and the date of the first attempt to repair the leak.

(iii) The date of successful repair of the leak.

(iv) The maximum instrument reading measured by the procedures in

paragraph (e) of this section after the leak is successfully repaired.

(v) Repair delayed and the reason for the delay if a leak is not repaired within 15 days after discovery of the leak. You may develop a written procedure that identifies the conditions that justify a delay of repair. In such cases, reasons for delay of repair may be documented by citing the relevant sections of the written procedure.

(vi) Copies of the compliance reports as specified in §63.11985(b)(9), if records are not maintained on a computerized database capable of generating summary reports from the records.

(4) *Instrument calibration records.* You must maintain records of the information specified in paragraphs (g)(4)(i) through (vi) of this section for monitoring instrument calibrations conducted according to sections 8.1.2 and 10 of Method 21 at 40 CFR part 60, appendix A–7, and paragraph (e) of this section.

(i) Date of calibration and initials of operator performing the calibration.

(ii) Calibration gas cylinder identification, certification date, and certified concentration.

(iii) Instrument scale(s) used.

(iv) A description of any corrective action taken if the meter readout could not be adjusted to correspond to the calibration gas value in accordance with section 10.1 of Method 21 at 40 CFR part 60, appendix A–7.

(v) Results of each calibration drift assessment required by paragraph (e)(2)(v)(D) of this section (*i.e.*, instrument reading for calibration at end of the monitoring day and the calculated percent difference from the initial calibration value).

(vi) If you make your own calibration gas, a description of the procedure used.

(5) *Unsafe-to-inspect records.* If you designate equipment as unsafe-to-inspect as specified in paragraph (d)(3) of this section, you must keep the records specified in paragraph (g)(5)(i) and (ii) of this section.

(i) You must maintain the identity of unsafe-to-inspect equipment as specified in paragraph (d)(3) of this section.

(ii) You must keep a written plan for inspecting unsafe-to-inspect equipment as required by paragraph (e)(4) of this section and record all activities performed according to the written plan.

(h) *Closed vent systems in vacuum service.* If you operate and maintain a closed vent system in vacuum service as defined in §63.12005, you must comply with the requirements in paragraphs (h)(1) through (3) of this section, and you are not required to comply with any other provisions of this section. Any incidence where a closed vent system designed to be in vacuum service is operating and not in vacuum service constitutes a violation of this rule, unless the closed vent system is meeting the requirements in paragraphs (a) through (g) of this section for closed vent systems that are not in vacuum service. Any such incidence during a performance test invalidates the performance test.

(1) *In vacuum service alarm.* You must install, maintain, and operate a pressure gauge and alarm system that will alert an operator immediately and automatically when the pressure is such that the closed vent system no longer meets the definition of in vacuum service as defined in §63.12005. The alarm must be located such that the alert is detected and recognized easily by an operator.

(2) *In vacuum service alarm procedures.* If the alarm is triggered for a closed vent system operating in vacuum service as specified in paragraph (h)(1) of this section, you must immediately initiate procedures to identify the cause of the alarm. If the closed vent system is not in vacuum service, you must initiate procedures to get the closed vent system back in vacuum service as defined in §63.12005, or you must immediately comply with the requirements in paragraphs (a) through (g) of this section for closed vent systems that are not in vacuum service.

(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). This report is required even if you elect to follow the procedures specified in §63.11895 to establish an affirmative defense and submit the reports specified in §63.11985(b)(11).

§ 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 or 2 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 or 2 to this subpart, except that flow indicators specified in § 63.11940(a) are not subject to the requirements of this section.

(b) *CEMS.* You must install, operate, and maintain each CEMS according to paragraphs (b)(1) through (7) of this section and continuously monitor emissions.

(1) You must prepare your quality control program and site-specific performance evaluation test plan, as specified in § 63.8(d) and (e). You must submit your performance evaluation test plan to the Administrator for approval, as specified in § 63.8(e)(3).

(2) The monitoring equipment must be capable of providing a continuous record, recording data at least once every 15 minutes.

(3) You must conduct initial and periodic site-specific performance evaluations and any required tests of each CEMS according to your quality control program and site-specific performance evaluation test plan prepared as specified in § 63.8(d) and (e).

(4) If supplemental gases are added to the control device, you must correct the measured concentrations in accordance with § 63.11945(d)(3).

(5) You must operate and maintain the CEMS in continuous operation according to the quality control program and performance evaluation test plan. CEMS must record data at least once every 15 minutes.

(6) CEMS must meet the minimum accuracy and calibration frequency requirements specified in the performance specifications specified in paragraphs (b)(6)(i) and (ii) of this section, as applicable.

(i) A hydrogen chloride or dioxin/furan CEMS must meet the requirements of the promulgated performance specification for the CEMS.

(ii) A total hydrocarbon CEMS must meet the requirements of 40 CFR Part 60, Appendix B, performance specification 8A.

(7) Before commencing or ceasing use of a CEMS system, you must notify the Administrator as specified in paragraphs (b)(7)(i) and (ii) of this section.

(i) You must notify the Administrator 1 month before starting use of the continuous emissions monitoring system.

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

(c) *CPMS.* You must install, maintain, and operate each CPMS as specified in paragraphs (c)(1) through (6) of this section and continuously monitor operating parameters.

(1) As part of your quality control program and site-specific performance evaluation test plan prepared as specified in § 63.8(d) and (e), you must prepare a site-specific monitoring plan that addresses the monitoring system design, data collection, and the quality assurance and quality control elements specified in paragraphs (c)(1)(i) through (v) of this section and § 63.8(d). You are not required to submit the plan for approval unless requested by the Administrator. You may request approval of monitoring system quality assurance and quality control procedure alternatives to those specified in paragraphs (c)(1)(i) through (v) of this section in your site-specific monitoring plan.

(i) The performance criteria and design specifications for the monitoring system equipment, including the sample interface, detector signal analyzer, and data acquisition and calculations.

(ii) Sampling interface (*e.g.*, thermocouple) location such that the monitoring system will provide representative measurements.

(iii) Equipment performance checks, calibrations, or other audit procedures.

(iv) Ongoing operation and maintenance procedures in accordance with provisions in §63.8(c)(1) and (3).

(v) Ongoing reporting and recordkeeping procedures in accordance with provisions in §63.10(c), (e)(1) and (e)(2)(i).

(2) The monitoring equipment must be capable of providing a continuous record, recording data at least once every 15 minutes.

(3) You must install, operate, and maintain each CPMS according to the procedures and requirements in your site-specific monitoring plan.

(4) You must conduct an initial and periodic site-specific performance evaluation tests of each CPMS according to your site-specific monitoring plan.

(5) All CPMS must meet the specific parameter (*e.g.*, minimum accuracy and calibration frequency) requirements specified in §63.11940 and Table 7 to this subpart.

(6) Monitoring equipment for temperature, pressure, volumetric flow rate, mass flow rate and conductivity must be capable of measuring the appropriate parameter over a range that extends at least 20 percent beyond the normal expected operating range of values for that parameter. The data recording system associated with affected CPMS must have a resolution that is equal to or better than one-half of the required system accuracy.

(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 or 2 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 or 2 to this subpart.

(2) You must include as part of the notification of compliance status or the operating permit application or amendment, the information in paragraphs (d)(2)(i) through (iv) of this section, as applicable, for each process vent control device requiring operating limits.

(i) Descriptions of monitoring devices, monitoring frequencies and operating scenarios.

(ii) The established operating limit of the monitored parameter(s).

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

(iv) The rationale used to determine which format to use for your operating limit (*e.g.*, operating range, minimum operating level or maximum operating level), where this subpart does not specify which format to use.

(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 precompliance 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 of why each operating limit indicates proper operation of the control device during the specific batch emission episode.

(4) If you elect to establish separate operating limits for different batch emission episodes within a batch process as specified in paragraph (d)(3) of this section, you must maintain daily records indicating each point at which you change from one operating limit to another, even if the monitoring duration for an operating limit is less than 15 minutes. You must maintain a daily record according to §63.11990(e)(4)(i).

(e) *Reduction of CPMS and CEMS data.* You must reduce CEMS and CPMS data to 1-hour averages according to §63.8(g) to compute the average values for demonstrating compliance specified in §§63.11925(e)(3)(ii), 63.11925(e)(4)(ii)(B), and 63.11960(c)(2) for CEMS and CPMS, as applicable.

§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 or 2 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.

(a) *Flow indicator.* If flow to a control device could be intermittent, you must install, calibrate, and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow.

(b) *Thermal oxidizer monitoring.* If you are using a thermal oxidizer to meet an emission limit in Table 1 or 2 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.

(1) If a thermal oxidizer other than a catalytic thermal oxidizer is used, you must install a temperature monitoring device in the fire box or in the ductwork immediately downstream of the fire box in a position before any substantial heat exchange occurs.

(2) Except as provided in paragraph (b)(3) of this section, where a catalytic thermal oxidizer is used, you must install temperature monitoring devices in the gas stream immediately before and after the catalyst bed. You must monitor the temperature differential across the catalyst bed.

(3) Instead of complying with paragraph (b)(2) of this section, and if the temperature differential between the inlet and outlet of the catalytic thermal oxidizer during normal operating conditions is less than 10 degrees Celsius (18 degrees Fahrenheit), you may elect to monitor the inlet temperature and conduct catalyst checks as specified in paragraphs (b)(3)(i) and (ii) of this section.

(i) You must conduct annual sampling and analysis of the catalyst activity (*i.e.*, conversion efficiency) following the manufacturer's or catalyst supplier's recommended procedures. If problems are found during the catalyst activity test, 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 sooner.

(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 problems 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 or better kind and quality 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 or better kind and quality as 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 or 2 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.

(1) Install and operate the monitoring equipment as specified in either paragraph (c)(1)(i) or (ii) of this section.

(i) A flow meter to monitor the absorber or acid gas scrubber influent liquid flow.

(ii) A flow meter to monitor the absorber or acid gas scrubber influent liquid flow and the gas stream flow using one of the procedures specified in paragraphs (c)(1)(ii)(A), (B), or (C) of this section. You must monitor the liquid-to-gas ratio determined by dividing the flow rate of the absorber or acid gas scrubber influent by the gas flow rate. The units of measure must be consistent with those used to calculate this ratio during the performance test.

(A) Determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) Measure the gas stream flow at the absorber or acid gas scrubber inlet.

(C) If you have previously determined compliance for a scrubber that requires a determination of the liquid-to-gas ratio, you may use the results of that test provided the test conditions are representative of current operation.

(2) Install and operate the monitoring equipment as specified in either paragraph (c)(2)(i), (ii), or (iii) of this section.

(i) Install and operate pressure gauges at the inlet and outlet of the absorber or acid gas scrubber to monitor the pressure drop through the absorber or acid gas scrubber.

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

(iii) If the difference between the specific gravity of the scrubber effluent scrubbing fluid and specific gravity of the scrubber inlet scrubbing fluid is greater than or equal to 0.02 specific gravity units, you may install and operate a specific gravity monitoring device on the inlet and outlet of the scrubber.

(3) If the scrubbing liquid is a reactant (e.g., lime, ammonia hydroxide), you must install and operate one of the devices listed in either paragraph (c)(3)(i), (ii) or (iii) of this section.

(i) A pH monitoring device to monitor the pH of the scrubber liquid effluent.

(ii) A caustic strength monitoring device to monitor the caustic strength of the scrubber liquid effluent.

(iii) A conductivity monitoring device to monitor the conductivity of the scrubber liquid effluent.

(d) *Regenerative adsorber monitoring.* If you are using a regenerative adsorber to meet an emission limit in Table 1 or 2 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 ±10 percent, capable of recording the total regeneration stream mass for each regeneration cycle. For non-vacuum regeneration systems, an integrating regeneration stream flow monitoring device capable of continuously recording the total regeneration stream mass flow for each regeneration cycle.

(2) For non-vacuum regeneration systems, an adsorber bed temperature monitoring device, capable of continuously recording the adsorber bed temperature after each regeneration and within 15 minutes of completing any temperature regulation (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.

(3) For non-vacuum and non-steam regeneration systems, an adsorber bed

temperature monitoring device capable of continuously recording the bed temperature during regeneration, except during any temperature regulating (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.

(4) For a vacuum regeneration system, a pressure transmitter installed in the vacuum pump suction line capable of continuously recording the vacuum level for each minute during regeneration. You must establish a minimum target and a length of time at which the vacuum must be below the minimum target during regeneration.

(5) A device capable of monitoring the regeneration frequency (*i.e.,* operating time since last regeneration) and duration.

(6) You must perform a verification of the adsorber during each day of operation. The verification must be through visual observation or through an automated alarm or shutdown system that monitors and records system operational parameters. The verification must verify that the adsorber is operating with proper valve sequencing and cycle time.

(7) You must conduct weekly measurements of the carbon bed outlet volatile organic compounds concentration over the last 5 minutes of an adsorption cycle for each carbon bed. For regeneration cycles longer than 1 week, you must perform the measurement over the last 5 minutes of each adsorption cycle for each carbon bed. The outlet concentration of volatile organic compounds must be measured using a portable analyzer, in accordance with Method 21 at 40 CFR part 60, appendix A–7, for open-ended lines. Alternatively, outlet concentration of HAP(s) may be measured using chromatographic analysis using Method 18 at 40 CFR part 60, appendix A–6.

(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 or 2 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.

(1) Establish the average adsorber bed life by conducting daily monitoring of the outlet volatile organic compound or HAP concentration, as specified in this paragraph (e)(1), of the first adsorber bed in series until breakthrough occurs for the first three adsorber bed change-outs. The outlet concentration of volatile organic compounds must be measured using a portable analyzer, in accordance with Method 21 at 40 CFR part 60, appendix A–7, for open-ended lines. Alternatively, outlet concentration of HAP may be measured using chromatographic analysis using Method 18 at 40 CFR part 60, appendix A–6. Breakthrough of the bed is defined as the time when the level of HAP detected is at the highest concentration allowed to be discharged from the adsorber system.

(2) Once the average life of the bed is determined, conduct ongoing monitoring as specified in paragraphs (e)(2)(i) through (iii) of this section.

(i) Except as provided in paragraphs (e)(2)(ii) and (iii) of this section, conduct daily monitoring of the adsorber bed outlet volatile organic compound or HAP concentration, as specified in paragraph (e)(1) of this section.

(ii) You may conduct monthly monitoring if the adsorbent has more than 2 months of life remaining, as determined by the average primary adsorber bed life, established in paragraph (e)(1) of this section, and the date the adsorbent was last replaced.

(iii) You may conduct weekly monitoring if the adsorbent has more than 2 weeks of life remaining, as determined by the average primary adsorber bed life, established in paragraph (e)(1) of this section, and the date the adsorbent was last replaced.

(3) The first adsorber in series must be replaced immediately when breakthrough is detected between the first and second adsorber. The original second adsorber (or a fresh canister) will become the new first adsorber and a fresh adsorber will become the second adsorber. For purposes of this paragraph (e)(3), ''immediately'' means within 8 hours of the detection of a

breakthrough for adsorbers of 55 gallons or less, and within 24 hours of the detection of a breakthrough for adsorbers greater than 55 gallons.

(4) In lieu of replacing the first adsorber immediately, you may elect to monitor the outlet of the second canister beginning on the day the breakthrough between the first and second canister is identified and each day thereafter. This daily monitoring must continue until the first canister is replaced. If the constituent being monitored is detected at the outlet of the second canister during this period of daily monitoring, both canisters must be replaced within 8 hours of the time of detection of volatile organic compounds or HAP at 90 percent of the allowed level (90 percent of breakthrough definition).

(f) *Condenser monitoring.* If you are using a condenser to meet an emission limit in Table 1 or 2 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 or 2 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.

(1) Submit a description of the planned monitoring, recordkeeping, and reporting procedures. The Administrator will approve, deny or modify the proposed monitoring, reporting and recordkeeping requirements as part of the review of the plan or through the review of the permit application or by other appropriate means.

(2) You must establish operating limits for monitored parameters that are approved by the Administrator. To establish the operating limit, the information required in §63.11935(d) must be submitted in the notification of compliance status report specified in §63.11985(a).

(h) *Alternatives to monitoring requirements.* (1) You may request approval to use alternatives to the continuous operating parameter monitoring listed in this section, as specified in §§63.11985(c)(4) and 63.8.

(2) You may request approval to monitor a different parameter than those established in §63.11935(d) or to set unique monitoring parameters, as specified in §§63.11985(c)(5) and 63.8. Until permission to use an alternative monitoring parameter has been granted by the Administrator, you remain subject to the requirements of this subpart.

§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 or 2 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. 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).

(1) *Continuous process vents.* For continuous process vents, you must conduct all performance tests at maximum representative operating conditions for the process. For continuous compliance, you must conduct subsequent performance tests within the range of operating limit(s) that were established for the control device during the initial or subsequent performance tests specified in §63.11925(d) and (e). If an operating limit is a range, then you must conduct subsequent performance tests within the range of maximum or minimum operating limits for the control device, which result in highest emissions (*i.e.*, lowest emission reduction).

(2) *Batch process operations.* Testing must be conducted at absolute worst-

case conditions or hypothetical worst-case conditions as specified in paragraph (c) of this section.

(3) *Combination of both continuous and batch unit operations.* You must conduct performance tests when the batch process vents are operating at absolute worst-case conditions or hypothetical worst-case conditions, as specified in paragraphs (c)(1) and (2) of this section, and at maximum representative operating conditions for the process. For continuous compliance, you must operate the control device as close as possible to your operating limit(s) for the control device established during the initial or subsequent performance tests specified in §63.11925 (d) and (e). If an operating limit is a range, then you must operate the control device as close as possible to the maximum or minimum operating limit for the control device, whichever results in higher emissions (*i.e.*, lower emission reduction), unless the Administrator specifies or approves alternate operating conditions.

(c) *Batch worst-case conditions.* The absolute worst-case conditions for batch process operations must be characterized by the criteria presented in paragraph (c)(1) of this section. The hypothetical worst-case conditions for batch process operations must be characterized by the criteria presented in paragraph (c)(2) of this section.

(1) *Absolute worst-case conditions.* For batch process operations, absolute worst-case conditions are defined by the criteria presented in paragraph (c)(1)(i) of this section if the maximum load is the most challenging condition for the control device. Otherwise, absolute worst-case conditions are defined by the conditions in paragraph (c)(1)(ii) of this section. You must consider all relevant factors, including load and compound-specific characteristics in defining absolute worst-case conditions.

(i) A 1-hour period of time in which the inlet to the control device contains the highest HAP mass loading rate, in pounds per hour, capable of being vented to the control device. An emission profile as described in §63.11925(g) must be used to identify the 1-hour period of maximum HAP loading.

(ii) The period of time when the HAP loading or stream composition (including non-HAP) is most challenging for the control device. These conditions include, but are not limited to the following:

(A) Periods when the stream contains the highest combined organic load, in pounds per hour, described by the emission profiles in §63.11925(g).

(B) Periods when the streams contain HAP constituents that approach limits of solubility for scrubbing media.

(C) Periods when the streams contain HAP constituents that approach limits of adsorptivity for adsorption systems.

(2) *Hypothetical worst-case conditions.* For batch process operations, hypothetical worst-case conditions are simulated test conditions that, at a minimum, contain the highest hourly HAP load of emissions that would be predicted to be vented to the control device based on the emissions profiles described in paragraphs (c)(3)(ii) or (iii) of this section.

(3) *Emission profile.* For batch process operations, you must develop an emission profile for the vent to the control device that describes the characteristics of the vent stream at the inlet to the control device under worst-case conditions. The emission profile must be developed based on any one of the procedures described in paragraphs (c)(3)(i) through (iii) of this section.

(i) *Emission profile by process.* The emission profile must consider all batch emission episodes that could contribute to the vent stack for a period of time that is sufficient to include all processes venting to the stack and must consider production scheduling. The profile must describe the HAP load to the device that equals the highest sum of emissions from the episodes that can vent to the control device in any given hour. Emissions per episode must be calculated using the procedures specified in §63.11950. Emissions per episode must be divided by the duration of the episode only if the duration of the episode is longer than 1 hour.

(ii) *Emission profile by equipment.* The emission profile must consist of emissions that meet or exceed the highest emissions, in pounds per hour that

would be expected under actual processing conditions. The profile must describe equipment configurations used to generate the emission events, volatility of materials processed in the equipment, and the rationale used to identify and characterize the emission events. The emissions may be based on using a compound more volatile than compounds actually used in the process(es), and the emissions may be generated from all equipment in the process(es) or only selected equipment.

(iii) *Emission profile by capture and control device limitation*. The emission profile must consider the capture and control system limitations and the highest emissions, in pounds per hour that can be routed to the control device, based on maximum flow rate and concentrations possible because of limitations on conveyance and control equipment (e.g., fans and lower explosive level alarms).

(d) *Concentration correction calculation*. If a combustion device is the control device and supplemental combustion air is used to combust the emissions, the concentration of total hydrocarbons, total organic HAP, vinyl chloride, and hydrogen chloride must be corrected as specified in paragraph (d)(1) or (2) of this section. If a control device other than a combustion device is used to comply with an outlet concentration emission limit for batch process vents, you must correct the actual concentration for supplemental gases as specified in paragraph (d)(3) of this section.

(1) Determine the concentration of total hydrocarbons, total organic HAP, vinyl chloride, or hydrogen chloride corrected to 3-percent oxygen (Cc) using Equation 1 of this section.

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right) \qquad \text{(Eq. 1)}$$

Where:

C_c = Concentration of total hydrocarbons, total organic HAP, vinyl chloride, or hydrogen chloride corrected to 3-percent oxygen, dry basis, parts per million by volume.

C_m = Concentration of total hydrocarbons, total organic HAP, vinyl chloride, or hydrogen chloride, dry basis, parts per million by volume.

$\%O_{2d}$ = Concentration of oxygen, dry basis, percentage by volume.

(2) To determine the oxygen concentration, you must use the emission rate correction factor (or excess air), integrated sampling and analysis procedures of Method 3, 3A, or 3B at 40 CFR part 60, appendix A–2, or ANSI/ASME PTC 19.10–1981 (incorporated by reference, see § 63.14).

(3) Correct the measured concentration for supplemental gases using Equation 2 of this section. Process knowledge and representative operating data may be used to determine the fraction of the total flow due to supplemental gas.

$$C_a = C_m \left(\frac{Q_s + Q_a}{Q_a} \right) \qquad \text{(Eq. 2)}$$

Where:

C_a = Corrected outlet concentration of HAP, dry basis, parts per million by volume (ppmv).

C_m = Actual concentration of HAP measured at control device outlet, dry basis, ppmv.

Q_a = Total volumetric flow rate of all gas streams vented to the control device, except supplemental gases.
Q_s = total volumetric flow rate of supplemental gases.

§63.11950 What emissions calculations must I use for an emission profile?

When developing your emission profiles for batch process vents as required in §63.11925(g), except as specified in paragraph (i) of this section, you must calculate emissions from episodes caused by vapor displacement, purging a partially filled vessel, heating, depressurization, vacuum operations, gas evolution, air drying, or empty vessel purging, using the applicable procedures in paragraphs (a) through (h) of this section.

(a) *Vapor displacement.* You must calculate emissions from vapor displacement due to transfer of material using Equation 1 of this section.

$$E = \left(\frac{V}{RT}\right)\sum_{i=1}^{n} P_i\left(MW_i\right) \qquad \text{(Eq. 1)}$$

(Eq. 1)
Where:
E = Mass of HAP emitted.
V = Volume of gas displaced from the vessel.
R = Ideal gas law constant.
T = Temperature of the vessel vapor space; absolute.
P_i = Partial pressure of the individual HAP.
MW_i = Molecular weight of the individual HAP.
n = Number of HAP compounds in the emission stream.
i = Identifier for a HAP compound.

(b) *Gas sweep of a partially filled vessel.* You must calculate emissions from purging a partially filled vessel using Equation 2 of this section. The pressure of the vessel vapor space may be set equal to 760 millimeters of mercury (mmHg). You must multiply the HAP partial pressure in Equation 2 of this section by a HAP-specific saturation factor determined in accordance with Equations 3 through 5 of this section. Solve Equation 3 of this section iteratively beginning with saturation factors (in the right-hand side of the equation) of 1.0 for each condensable compound. Stop iterating when the calculated saturation factors for all compounds are the same to two significant figures for subsequent iterations. Note that for multi-component emission streams, saturation factors must be calculated for all condensable compounds, not just the HAP.

$$E = \sum_{i=1}^{n} P_i MW_i \left(\frac{Vt}{RT}\right)\left(\frac{P_T}{P_T - \sum_{j=1}^{m}(P_j)}\right) \qquad \text{(Eq. 2)}$$

(Eq. 2)
Where:
E = Mass of HAP emitted.
V = Purge flow rate of the noncondensable gas at the temperature and pressure of the vessel vapor space.
R = Ideal gas law constant.
T = Temperature of the vessel vapor space; absolute.

P_i = Partial pressure of the individual HAP at saturated conditions.
P_j = Partial pressure of individual condensable compounds (including HAP) at saturated conditions.
P_T = Pressure of the vessel vapor space.
MW_i = Molecular weight of the individual HAP.
t = Time of purge.
n = Number of HAP compounds in the emission stream.
i = Identifier for a HAP compound.
j = Identifier for a condensable compound.
m = Number of condensable compounds (including HAP) in the emission stream.

$$S_i = \frac{K_i A}{K_i A + V + \sum_{i=1}^{n} S_i V_i^{sat}} \qquad \text{(Eq. 3)}$$

$$V_i^{sat} = \frac{VP_i}{\left(P_T - \sum_{i=1}^{n} P_i\right)} \qquad \text{(Eq. 4)}$$

$$K_i = K_o \left(\frac{M_o}{M_i}\right)^{1/3} \qquad \text{(Eq. 5)}$$

Where:

S_i = Saturation factor for individual condensable compounds.
P_i = Partial pressure of individual condensable compounds at saturated conditions.
PT = Pressure of the vessel vapor space.
A = Surface area of liquid.
V = Purge flow rate of the noncondensable gas.
V_i^{sat} = Volumetric flow rate of individual condensable compounds at saturated vapor pressure.
K_i = Mass transfer coefficient of individual condensable compounds in the emission stream.
K_o = Mass transfer coefficient of reference compound (*e.g.*, 0.83 cm/s for water).
M_o = Molecular weight of reference compound (*e.g.*, 18.02 for water).
M_i = Molecular weight of individual condensable compounds in the emission stream.
n = Number of condensable compounds in the emission stream.

(c) *Heating.* You must calculate emissions caused by the heating of a vessel to a temperature lower than the boiling point using the procedures in paragraph (c)(1) of this section. If the contents of a vessel are heated to the boiling point, you must calculate emissions using the procedures in paragraph (c)(2) of this section.

(1) If the final temperature to which the vessel contents are heated is lower than the boiling point of the HAP in the vessel, you must calculate the mass of HAP emitted per episode using Equation 6 of this section. The average gas space molar volume during the heating process is calculated using Equation 7 of this section. The difference in the number of moles of condensable in the vessel headspace between the initial and final temperatures is calculated using Equation 8 of this section.

$$E = MW_{HAP}\left[N_{avg} \ln\left[\frac{P_T - \sum_{i=1}^{n}\left(P_{i,1}\right)}{P_T - \sum_{i=1}^{n}\left(P_{i,2}\right)} \right] - \left(n_{i,2} - n_{i,1}\right) \right] \qquad \text{(Eq. 6)}$$

(Eq. 6)

Where:

E = Mass of HAP vapor displaced from the vessel being heated.

N_{avg} = Average gas space molar volume during the heating process.

P_T = Total pressure in the vessel.

$P_{i,1}$ = Partial pressure of the individual HAP compounds at initial temperature (T_1).

$P_{i,2}$ = Partial pressure of the individual HAP compounds at final temperature (T_2).

MW_{HAP} = Average molecular weight of the HAP compounds calculated using Equation 13 of this section.

$n_{i,1}$ = Number of moles of condensable in the vessel headspace at initial temperature (T_1).

$n_{i,2}$ = Number of moles of condensable in the vessel headspace at final temperature (T_2).

n = Number of HAP compounds in the emission stream.

ln = Natural logarithm.

$$N_{avg} = \frac{VP_T}{2R}\left(\frac{1}{T_1} + \frac{1}{T_2}\right) \qquad \text{(Eq. 7)}$$

(Eq. 7)

Where:

N_{avg} = Average gas space molar volume during the heating process.

V = Volume of free space in vessel.

P_T = Total pressure in the vessel.

R = Ideal gas law constant.

T_1 = Initial temperature of the vessel.

T_2 = Final temperature of the vessel.

$$\left(n_{i,2} - n_{i,1}\right) = \frac{V}{RT_2}\sum_{i=1}^{n}P_{i,2} - \frac{V}{RT_1}\sum_{i=1}^{n}P_{i,1} \qquad \text{(Eq. 8)}$$

Where:

V = Volume of free space in vessel.

R = Ideal gas law constant.

T_1 = Initial temperature in the vessel.

T_2 = Final temperature in the vessel.

$P_{i,1}$ = Partial pressure of the individual HAP compounds at T_1.

$P_{i,2}$ = Partial pressure of the individual HAP compounds at T_2.

n = Number of HAP compounds in the emission stream.

(2) If the final temperature to which the vessel contents are heated is at the boiling point or higher, you must calculate emissions using the procedure in paragraphs (c)(2)(i) and (ii) of this section.

(i) To calculate the emissions from heating to the boiling point use Equations 9, 10 and 11 of this section. (Note that $Pa_2 = 0$ in the calculation of $\Delta\eta$ in Equation 10 of this section.)

$$E = \Delta\eta \times \frac{\sum_{i=1}^{n} P_i MW_{HAP}}{P_T - \sum_{j=1}^{m} \left(P_j\right)} \qquad \text{(Eq. 9)}$$

Where:

E = Mass of HAP emitted.

$\Delta\eta$ = The number of moles of noncondensable displaced from the vessel, as calculated using Equation 10 of this section.

P_T = Pressure in the receiver.

P_i = Partial pressure of the individual HAP determined at the exit temperature of the condenser or at the conditions of the dedicated receiver.

P_j = Partial pressure of the individual condensable (including HAP) determined at the exit temperature of the condenser or at the conditions of the dedicated receiver.

n = Number of HAP compounds in the emission stream.

i = Identifier for a HAP compound.

j = Identifier for a condensable compound.

MW_{HAP} = The average molecular weight of HAP in vapor exiting the dedicated receiver, as calculated using Equation 11 of this section with partial pressures determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

m = Number of condensable compounds (including HAP) in the emission stream.

$$\Delta\eta = \frac{V}{R}\left[\left(\frac{Pa_1}{T_1}\right) - \left(\frac{Pa_2}{T_2}\right)\right] \qquad \text{(Eq. 10)}$$

$$MW_{HAP} = \sum_{i=1}^{n} \frac{\left(\left(P_i\right)_{T_1} + \left(P_i\right)_{T_2}\right) MW_i}{\sum_{i=1}^{n} \left(\left(P_i\right)_{T_1} + \left(P_i\right)_{T_2}\right)} \qquad \text{(Eq. 11)}$$

Where:

$\Delta\eta$ = Number of moles of noncondensable gas displaced from the vessel.

V = Volume of free space in the vessel.

R = Ideal gas law constant.

T_1 = Initial temperature of vessel contents, absolute.

T_2 = Final temperature of vessel contents, absolute.

Pan = Partial pressure of noncondensable gas in the vessel headspace at initial (n=1) and final (n=2) temperature.

MW_{HAP} = The average molecular weight of HAP in vapor exiting the dedicated receiver.

$(P_i)Tn$ = Partial pressure of each HAP in the vessel headspace at initial (T_1) and final (T_2) temperature of the receiver.

MW_i = Molecular weight of the individual HAP.
n = Number of HAP compounds in the emission stream.
i = Identifier for a HAP compound.

(ii) While boiling, the vessel must be operated with a properly operated process condenser. An initial demonstration that a process condenser is properly operated must be conducted during the boiling operation and documented in the notification of compliance status report described in §63.11985(a). You must either measure the liquid temperature in the receiver or the temperature of the gas stream exiting the condenser and show it is less than the boiling or bubble point of the HAP in the vessel; or perform a material balance around the vessel and condenser and show that at least 99 percent of the recovered HAP vaporized while boiling is condensed. This demonstration is not required if the process condenser is followed by a condenser acting as a control device or if the control device is monitored using a CEMS.

(d) *Depressurization.* You must calculate emissions from depressurization using Equation 12 of this section.

$$E = \frac{V}{RT} \times \ln\left(\frac{P_1 - \sum_{j=1}^{m}(P_j)}{P_2 - \sum_{j=1}^{m}(P_j)}\right) \times \sum_{i=1}^{n}(P_i)(MW_i) \qquad \text{(Eq. 12)}$$

Where:
E = Emissions.
V = Free volume in vessel being depressurized.
R = Ideal gas law constant.
T = Temperature of the vessel, absolute.
P_1 = Initial pressure in the vessel.
P_2 = Final pressure in the vessel.
P_j = Partial pressure of the individual condensable compounds (including HAP).
MW_i = Molecular weight of the individual HAP compounds.
n = Number of HAP compounds in the emission stream.
m = Number of condensable compounds (including HAP) in the emission stream.
i = Identifier for a HAP compound.
j = Identifier for a condensable compound.
ln = Natural logarithm.

(e) *Vacuum systems.* You must calculate emissions from vacuum systems using Equation 13 of this section if the air leakage rate is known or can be approximated. The receiving vessel is part of the vacuum system for purposes of this subpart.

$$E = \frac{(La)(t)}{MW_{nc}}\left(\frac{\sum_{i=1}^{n} P_i MW_i}{P_T - \sum_{j=1}^{m}(P_j)}\right) \qquad \text{(Eq. 13)}$$

Where:
E = Mass of HAP emitted.
P_T = Absolute pressure of receiving vessel or ejector outlet conditions, if there is no receiver.

P_i = Partial pressure of the HAP at the receiver temperature or the ejector outlet conditions.
P_j = Partial pressure of condensable (including HAP) at the receiver temperature or the ejector outlet conditions.
La = Total air leak rate in the system, mass/time.
MW_{nc} = Molecular weight of noncondensable gas.
t = Time of vacuum operation.
MWi = Molecular weight of the individual HAP in the emission stream, with HAP partial pressures calculated at the temperature of the receiver or ejector outlet, as appropriate.

(f) *Gas evolution.* You must calculate emissions from gas evolution using Equation 13 in paragraph (e) of this section with mass flow rate of gas evolution, Wg, substituted for La.

(g) *Air drying.* You must calculate emissions from air drying using Equation 14 of this section:

$$E = B \times \left(\frac{PS_1}{100 - PS_1} - \frac{PS_2}{100 - PS_2} \right) \qquad \text{(Eq. 14)}$$

Where:
E = Mass of HAP emitted.
B = Mass of dry solids.
PS_1 = HAP in material entering dryer, weight percent.
PS_2 = HAP in material exiting dryer, weight percent.

(h) *Empty vessel purging.* You must calculate emissions from empty vessel purging using Equation 15 of this section (Note: The term e-Ft/v can be assumed to be 0):

$$E = \left(\frac{V}{RT} \times \left[\sum_{i=1}^{n} (P_i)(MW_i) \right] (1 - e^{-Ft/V}) \right) \qquad \text{(Eq. 15)}$$

Where:
V = Volume of empty vessel.
R = Ideal gas law constant.
T = Temperature of the vessel vapor space; absolute.
P_i = Partial pressure of the individual HAP at the beginning of the purge.
MW_i = Molecular weight of the individual HAP.
F = Flow rate of the purge gas.
t = Duration of the purge.
n = Number of HAP compounds in the emission stream.
i = Identifier for a HAP compound.

(i) *Engineering assessments.* You must conduct an engineering assessment to calculate HAP emissions or emission episodes from each process vent that are not due to vapor displacement, partially filled vessel purging, heating, depressurization, vacuum operations, gas evolution, air drying or empty vessel purging. An engineering assessment may also be used to support a finding that the emissions estimation equations in this section are inappropriate. All data, assumptions and procedures used in the engineering assessment must be documented, are subject to preapproval by the Administrator, and must be reported in the batch precompliance report. An engineering assessment should include, but is not limited to, the items listed in paragraphs (i)(1) through (4) of this section.

(1) Previous test results provided the tests are representative of current operating practices at the process unit.

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

(3) Maximum flow rate, HAP emission rate, concentration, or other relevant parameter specified or implied within a permit limit applicable to the process vent.

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

(i) Use of material balances based on process stoichiometry to estimate maximum organic HAP concentrations.

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

(iii) Estimation of HAP concentrations based on saturation conditions.

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

(a) Before opening any process component (including pre-polymerization reactors used in the manufacture of bulk resins) for any reason, the quantity of vinyl chloride must be reduced to an amount that occupies a volume of no more than 2.0 percent of the component's or equipment's containment volume, or 25 gallons, whichever is larger, at standard temperature and pressure.

(b) Before opening a polymerization reactor for any reason, the quantity of vinyl chloride is not to exceed 0.04 pounds per ton of PVC product, with the product determined on a dry solids basis.

(c) Any gas or vapor HAP removed from a process component in accordance with paragraphs (a) and (b) of this section must be vented to a closed vent system and control device meeting the requirements of §§ 63.11925 through 63.11950.

(d) Each gasholder in vinyl chloride service must meet the requirements of paragraphs (d)(1) through (3) of this section.

(1) Each gasholder must be vented to a closed vent system and control device meeting the requirements of §§ 63.11925 through 63.11950.

(2) Each gasholder must operate with one or more of the following installed on the water seal to reduce emissions:

(i) Floating balls;

(ii) Hollow floating disks;

(iii) Oil layer; and/or

(iv) Floating mats.

(3) Each gasholder must have established operating procedures that include provisions for ensuring that the requirements of paragraph (d)(2) of this section are met at all times except during periods of maintenance or repair. The standard operating procedures must be developed and implemented and made available to the Administrator upon request.

§ 63.11956 What are my compliance requirements for ambient monitoring?

You must operate a reliable and accurate vinyl chloride monitoring system for detection of major leaks and identification of the general area of the affected source where a leak is located. A vinyl chloride monitoring system means a device which obtains air samples from one or more points on a continuous sequential basis and analyzes the samples with gas chromatography or, if you assume that all hydrocarbons measured are vinyl chloride, analyzes the samples with infrared spectrophotometry, flame ion detection, or an equivalent or alternative method. You must operate the vinyl chloride monitoring system according to a program that you develop for your affected source. You must submit a description of the program to the Administrator within 45 days of your compliance date, unless a waiver of compliance is granted by the Administrator, or the program has been approved and the Administrator does not request a review of the program. Approval of a program will be granted by the Administrator provided the Administrator finds:

(a) The location and number of points to be monitored and the frequency of monitoring provided for in the program are acceptable when they are compared with the number of pieces of equipment in vinyl chloride service and size and physical layout of the affected source.

(b) It contains a definition of leak which is acceptable when compared with the background concentrations of vinyl chloride in the areas of the plant to be monitored by the vinyl chloride monitoring system. Measurements of background concentrations of vinyl chloride in the areas of the plant to be monitored by the vinyl chloride monitoring system are to be included with the description of the program. The

definition of leak for a given plant may vary among the different areas within the plant and is also to change over time as background concentrations in the plant are reduced.

(c) It contains an acceptable plan of action to be taken when a leak is detected.

(d) It provides for an acceptable calibration and maintenance schedule for the vinyl chloride monitoring system and portable hydrocarbon detector. For the vinyl chloride monitoring system, a daily span check must be conducted with a concentration of vinyl chloride equal to the concentration defined as a leak according to paragraph (b) of this section. The calibration must be done with either:

(1) A calibration gas mixture prepared from the gases specified in sections 7.2.1 and 7.2.2 of Method 106 at 40 CFR part 61, appendix B, and in accordance with section 10.1 of Method 106, or

(2) A calibration gas cylinder standard containing the appropriate concentration of vinyl chloride. The gas composition of the calibration gas cylinder standard must have been certified by the manufacturer. The manufacturer must have recommended a maximum shelf life for each cylinder so that the concentration does not change greater than ±5 percent from the certified value. The date of gas cylinder preparation, certified vinyl chloride concentration, and recommended maximum shelf life must have been affixed to the cylinder before shipment from the manufacturer to the buyer. If a gas chromatograph is used as the vinyl chloride monitoring system, these gas mixtures may be directly used to prepare a chromatograph calibration curve as described in Sections 8.1 and 9.2 of Method 106. The requirements in Sections 7.2.3.1 and 7.2.3.2 of Method 106 for certification of cylinder standards and for establishment and verification of calibration standards are to be followed.

§ 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 or 2 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. This list must be continuously updated 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 (b)(1)(ii) of this section.

(i) You must analyze each resin sample for all Table 10 HAP using the test methods specified in paragraph (e) of this section.

(ii) You must also analyze each resin sample for any HAP that are not a Table 10 HAP but are expected to be present in that resin sample based on your facility-specific list of HAP using the appropriate test method specified in paragraph (e) of this section.

(2) [Reserved]

(c) *Demonstration of initial compliance.* You must demonstrate initial compliance for each resin stripper or for each group of resin strippers used to process the same resin type.

(1) You must conduct an initial performance test for the resin stripper, measuring the concentration of vinyl chloride and total non-vinyl chloride organic HAP in the stripped resin at the outlet of each resin stripper as specified in paragraphs (c)(1)(i) through (iv) of this section.

(i) Use the test method(s) and procedures specified in paragraph (e) of this section.

(ii) Collect samples when the PVCPU is producing the resin grade of which you manufacture the most, based on the total mass per resin grade of a given resin type produced in the 12 months preceding the sampling event.

(iii) For continuous processes, during a 24-hour sampling period, for each resin grade produced, collect 1 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 1 grab sample for each batch. 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 or 2 to this subpart as specified in paragraphs (c)(2)(i) and (ii) of this section.

(i) Calculate the 24-hour arithmetic average vinyl chloride and total non-vinyl chloride organic HAP concentrations for each stripper for each resin grade produced during the 24-hour sampling period, using the vinyl chloride and non vinyl-chloride HAP concentrations measured for the grab samples collected as specified in paragraph (c)(1)(iii) and (iv) of this section and using the calculation procedure specified in paragraph (f) of this section to determine the total non-vinyl chloride organic HAP concentration of each sample.

(ii) Demonstrate compliance with the vinyl chloride and total non-vinyl chloride organic HAP emission limits in Table 1 or 2 to this subpart based on the 24-hour arithmetic average concentrations calculated in either paragraph (c)(2)(ii)(A) or (B) of this section.

(A) If more than one resin grade was produced during the 24-hour sampling period, use Equation 1 of this section to calculate the 24-hour grade weighted arithmetic average vinyl chloride and total non-vinyl chloride organic HAP concentrations for each stripper, or for each group of strippers used to process the same type of resin, using the 24-hour average vinyl chloride and total non-vinyl chloride organic HAP concentrations calculated in paragraph (c)(2)(i) of this section and the mass of each resin grade produced during the 24-hour sampling period.

$$A_T = \frac{\Sigma_{i=1}^{n} P_{Gi} C_{Gi}}{Q_T} = \frac{P_{G1} C_{G1} + P_{G2} C_{G2} + \ldots + P_{Gn} C_{Gn}}{Q_T} \qquad \text{(Eq. 1)}$$

Where:

A_T = 24-hour average concentration of resin type T, parts per million by weight (dry basis).

P_{Gi} = Production of resin grade G_i, pounds.

C_{Gi} = 24-hour average concentration of vinyl chloride or total non-vinyl chloride organic HAP in resin grade G_i, ppmw.

Q_T = Total production of resin type T over the 24-hour sampling period, pounds.

(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 paragraph (c)(2)(i) 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) *Demonstration of continuous compliance.* You must demonstrate continuous compliance for each resin stripper or for each group of resin strippers used to process the same resin type.

(1) On a daily basis, you must measure the concentration of vinyl chloride in stripped resin using the test method(s) and procedures specified in paragraph (e) of this section, and the procedures specified in paragraphs (c)(1)(iii) and (iv) of this section.

(2) On a monthly basis, you must measure the concentration of total non-vinyl chloride organic HAP in stripped resin using the test method(s) and procedures specified in paragraph (e) of this section, and the procedures specified in paragraphs (c)(1)(iii) and (iv) of this section.

(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 or 2 to this subpart as specified in paragraphs (c)(2)(i) and (ii) of this section.

(e) *Test methods and procedures for determining concentration of vinyl chloride and total non-vinyl chloride organic HAP.* You must determine the concentration of vinyl chloride and total non-vinyl chloride organic HAP using the test methods and procedures specified in paragraphs (e)(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.

(1) For measuring total non-vinyl chloride organic HAP, you must use the methods specified in paragraphs (e)(1)(i) through (iv) of this section.

(i) SW–846–8260B (incorporated by reference, see § 63.14) for analysis of volatile organic compounds listed in Table 10 of this subpart.

(ii) SW–846–8270D (incorporated by reference, see § 63.14) for analysis of semivolatile organic compounds listed in table 10 of this subpart.

(iii) SW–846–8315A (incorporated by reference, see § 63.14) for analysis of aldehyde compounds listed in table 10 of this subpart.

(iv) SW–846–8015C (incorporated by reference, see § 63.14) for analysis of alcohol compounds listed in table 10 of this subpart.

(2) For measuring vinyl chloride, you must use Method 107 at 40 CFR part 61, appendix B.

(3) When using the methods specified in paragraphs (e)(1) and (2) of this section, for sample collection, preservation, transport, and analysis, you must minimize loss of HAP and maintain sample integrity.

(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 paragraphs (b)(1)(i) and (b)(1)(ii) of this section by using Equation 2 to this section.

$$C_{TNVCH} = \sum_{i=1}^{n} C_i \quad \text{(Eq. 2)}$$

Where:

C_{TNVCH} = Concentration of total non-vinyl chloride organic HAP compounds in the stripped resin sample, in parts per million by weight (ppmw).

C_i = Concentration of individual HAP present in the stripped resin sample analyzed pursuant to paragraphs (b)(1)(i) and (b)(1)(ii) 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.

§ 63.11965 What are my general compliance requirements for wastewater?

(a) The concentration of vinyl chloride and total non-vinyl chloride organic HAP in each process wastewater stream containing greater than the limits specified in Table 1 or 2 to this subpart, measured immediately as it leaves a piece of process equipment and before being mixed with any other process wastewater stream, must be reduced to the limits specified in Table 1 or 2 to this subpart. The applicable limits in Table 1 or 2 to this subpart must be met 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 limits specified in Table 1 or 2 to this subpart, before being exposed to the atmosphere, and before being discharged from the affected source.

(b) *Initial determination of process wastewater streams that need to be treated.* You must determine which process wastewater streams require treatment as specified in paragraphs (b)(1) and (2)

of this section and meet the requirements of paragraphs (c) and (d) of this section.

(1) You must collect process wastewater samples as specified in paragraphs (b)(1)(i) and (ii) of this section.

(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 limits specified in Table 1 or 2 to this subpart, before being exposed to the atmosphere, and before being discharged from the affected source.

(ii) For untreated process wastewater streams, you must collect process wastewater samples at the location immediately as the stream leaves a piece of process equipment, before being mixed with any other process stream or process wastewater stream, before being exposed to the atmosphere, and before being discharged from the affected source.

(2) You must measure the concentration of vinyl chloride and 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.* Each process wastewater stream that has a vinyl chloride or total non-vinyl chloride organic HAP concentration equal to or greater than the limits specified in Table 1 or 2 to this subpart, determined pursuant to paragraph (a) of this section must be treated to reduce the concentration of vinyl chloride or total non-vinyl chloride organic HAP to below the applicable limits specified in Table 1 or 2 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.

(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 limits specified in Table 1 or 2 to this subpart, determined pursuant to paragraph (a) 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 of subpart F of this part.

(f) *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 process wastewater stream at your PVCPU. 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) For the purposes of demonstrating initial and continuous compliance as required in §§ 63.11970 and 63.11975 of this subpart, you must meet the requirements specified in paragraphs (f)(1)(i) and (ii) of this section.

(i) You must analyze each process wastewater sample for all HAP listed in Table 10 to this subpart 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 listed in Table 10 to this subpart 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).

(2) [Reserved]

§ 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 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(s) 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 limits specified in Tables 1 or 2 to this subpart, you must use the measurement specified in § 63.11965(b)(1)(ii) to demonstrate initial compliance.

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

(a) For each process wastewater stream that must be treated to reduce the concentration of vinyl chloride or total non-vinyl chloride organic HAP 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 to reduce either vinyl chloride or total non-vinyl chloride organic HAP concentration, 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), you must demonstrate continuous compliance with the emission limits for vinyl chloride and total non-vinyl chloride organic HAP specified in Table 1 or 2 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 total non-vinyl chloride organic HAP concentrations using the procedures and methods specified in § 63.11965(b)(1) and (2).

(2) You must demonstrate continuous compliance with the emission limits in Table 1 or 2 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 to reduce the vinyl chloride or total non-vinyl chloride organic HAP concentration, 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 total non-vinyl chloride organic HAP concentrations using the procedures and methods specified in § 63.11965(b)(1) and (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 emission limits in Table 1 or 2 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.

§ 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 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 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.

(2) For measuring total non-vinyl chloride organic HAP, you must conduct sampling and analysis using the

methods specified in paragraphs (a)(2)(i) through (iv) of this section.

(i) SW–846–8260B (incorporated by reference, see §63.14) for analysis of volatile organic compounds listed in Table 10 of this subpart.

(ii) SW–846–8270D (incorporated by reference, see §63.14) for analysis of semivolatile organic compounds.

(iii) SW–846–8315A (incorporated by reference, see §63.14) for analysis of aldehyde compounds.

(iv) SW–846–8015C (incorporated by reference, see §63.14) for analysis of alcohol compounds.

(3) For measuring vinyl chloride, you must use Method 107 at 40 CFR part 61, appendix B.

(4) When using the methods in paragraphs (a)(2) and (3) of this section, you must meet the requirements in paragraphs (a)(4)(i) through (iii) of this section.

(i) Sample collection may consist of grab or composite samples.

(ii) Samples must be taken before the process wastewater stream is exposed to the atmosphere.

(iii) You must ensure that sample collection, preservation, transport, and analysis minimizes loss of HAP and maintains sample integrity.

(b) Method for calculating total non-vinyl chloride organic HAP concentration. 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.

$$C_{TNVCH} = \sum_{i=1}^{n} C_i \qquad \text{(Eq. 1)}$$

Where:

C_{TNVCH} = Concentration of total non-vinyl chloride organic HAP, in parts per million by weight (ppmw).

C_i = Concentration of individual HAP present in the sample analyzed pursuant to §63.11965(f)(1) excluding vinyl chloride, in ppmw, where a value of zero should be used for any HAP concentration that is below the detection limit.

NOTIFICATIONS, REPORTS AND RECORDS

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

In addition to the notifications and reports required in subpart A of this part, as specified in Table 4 to this subpart, you must submit the additional information and reports specified in paragraphs (a) through (c) of this section, as applicable.

(a) *Notification of compliance status.* When submitting the notification of compliance status required in §63.9(h), you must also include the information specified in paragraphs (a)(1) through (9) of this section, as applicable.

(1) You must include an identification of the storage vessels subject to this subpart, including the capacity and liquid stored for each vessel. You must submit the information specified in paragraph (a)(2) of this section for each pressure vessel.

(2) You must include the information specified in §63.1039(a) for equipment leaks.

(3) You must include an identification of the heat exchange systems that are subject to the requirements of this subpart.

(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 or 2 to this subpart, as determined pursuant to §63.11935(d). This report must include the information in §63.11935(d)(2), as applicable.

(5) You must include the records specified in paragraphs (a)(5)(i) through (iii) of this section, as applicable, for process vents.

(i) You must include the performance test records specified in §63.11990(f)(1), as applicable. These reports must include one complete test report for each test method used for each process vent. A complete test report must include a brief process description, sampling site

description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations and any other information required by the test method. For additional tests performed for the same kind of emission point using the same method, the results and any other information required in applicable sections of this subpart must be submitted, but a complete test report is not required.

(ii) You must include the information specified in paragraphs (a)(5)(ii)(A) through (C) of this section for batch process vent operations.

(A) Descriptions of worst-case operating and/or testing conditions for control devices including results of emissions profiles.

(B) Calculations used to demonstrate initial compliance according to §§ 63.11945 and 63.11950, including documentation of the proper operation of a process condenser(s) as specified in § 63.11950(c)(2)(ii).

(C) Data and rationale used to support an engineering assessment to calculate emissions in accordance with § 63.11950(i).

(iii) If you use a control device other than those listed in § 63.11940 for your process vent, then you must include a description of the parameters to be monitored to ensure the control device is operated in conformance with its design and achieves the specified emission limitation; an explanation of the criteria used to select the parameter; and a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that you will establish an operating limit for the monitored parameter as specified in paragraph (a)(4) of this section.

(6) [Reserved]

(7) You must include the records specified in paragraphs (a)(7)(i) and (ii) of this section, as applicable, for resin strippers.

(i) You must include an identification of each resin stripper and resin type subject to the requirements of this subpart.

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

(8) You must include the records specified in paragraphs (a)(8)(i) and (ii) of this section, as applicable, for process wastewater.

(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 or 2 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 and total non-vinyl chloride organic HAP limits in Table 1 or 2 to this subpart.

(9) You must include a certification of compliance, signed by a responsible official, as applicable that states the following:

(i) ''This facility complies with the requirements in this subpart for storage vessels.''

(ii) ''This facility complies with the requirements in this subpart for equipment leaks.''

(iii) ''This facility complies with the requirements in this subpart for heat exchange systems.''

(iv) ''This facility complies with the requirements in this subpart for HAP emissions from process vents.''

(v) ''This facility complies with the requirements in this subpart for other emission sources.''

(vi) ''This facility complies with the requirements in this subpart for the stripped resin.''

(vii) ''This facility complies with the requirements in this subpart for wastewater.''

(b) *Compliance reports.* When submitting the excess emissions and continuous monitoring system performance report and summary report required in § 63.10(e)(3), you must also include the

information specified in paragraphs (b)(1) through (12) of this section, as applicable. This report is referred to in this subpart as your compliance report.

(1) You must include a copy of the inspection record specified in §63.11990(b)(2) for each storage vessel when a defect, failure, or leak is detected. You must also include a copy of the applicable information specified in §63.1039(b)(5) through (8) of subpart UU of this part for each pressure vessel.

(2) You must include the information specified in §63.1039(b) for equipment leaks, except for releases from pressure relief devices. For any releases from pressure relief devices, you must submit the report specified in paragraph (c)(7) of this section instead of the information specified in §63.1039(b)(4) of subpart UU of this part.

(3) You must include the information specified in paragraphs (b)(3)(i) through (vi) of this section for heat exchange systems.

(i) The number of heat exchange systems in HAP service.

(ii) The number of heat exchange systems in HAP service found to be leaking.

(iii) A summary of the monitoring data that indicate a leak, including the number of leaks determined to be equal to or greater than the leak definition.

(iv) If applicable, the date a leak was identified, the date the source of the leak was identified and the date of repair.

(v) If applicable, a summary of each delayed repair, including the original date and reason for the delay and the date of repair, if repaired during the reporting period.

(vi) If applicable, an estimate of total VOC or vinyl chloride emissions for each delayed repair over the reporting period.

(4) You must include the records specified in paragraphs (b)(4)(i) through (iii) of this section, as applicable, for process vents, resin strippers, and wastewater.

(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 or 2 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 or 2 to this subpart or when the value does not meet the data availability requirements defined in §63.11890(c).

(B) For CPMS, the average value calculated for any day (based on the data averaging periods for compliance specified in Table 5 to this subpart) that does not meet your operating limit established according to §63.11935(d) or that does not meet the data availability requirements specified in §63.11890(c).

(C) The cause for the calculated emission level or operating parameter level to not meet the established emission limit or operating limit.

(D) For deviations caused by lack of monitoring data, the duration of periods when monitoring data were not collected.

(E) Operating logs of batch process operations for each day during which the deviation occurred, including a description of the operating scenario(s) during the deviation.

(ii) New operating scenario. Include each new operating scenario that has been operated since the time period covered by the last compliance report and has not been submitted in the notification of compliance status report or a previous compliance report. For each new operating scenario, you must provide verification that the operating conditions for any associated control or treatment device have not been exceeded and constitute proper operation for the new operating scenario. You must provide any required calculations and engineering analyses that have been performed for the new operating scenario. For the purposes of this paragraph (b)(4)(ii), a revised operating scenario for an existing process is considered to be a new operating scenario when one or more of the data elements listed in §63.11990(e)(4) have changed.

(iii) Process changes. You must document process changes, or changes made to any of the information submitted in the notification of compliance status report or a previous compliance report,

that is not within the scope of an existing operating scenario, in the compliance report. The notification must include all of the information in paragraphs (b)(4)(iii)(A) through (C) of this section.

(A) A description of the process change.

(B) Revisions to any of the information reported in the original notification of compliance status report as provided in paragraph (a) of this section.

(C) Information required by the notification of compliance status report, as provided in paragraph (a) of this section, for changes involving the addition of processes, components, or equipment at the affected source.

(5) You must submit the applicable information specified in paragraphs (b)(5)(i) through (iii) of this section for process vents.

(i) For catalytic thermal oxidizers for which you have selected the alternative monitoring specified in §63.11940(b)(3), results of the annual catalyst sampling and inspections required by §63.11940(b)(3)(i) and (ii) including any subsequent corrective actions taken.

(ii) For regenerative adsorbers, results of the adsorber bed outlet volatile organic compounds concentration measurements specified in §63.11940(d)(7).

(iii) For non-regenerative adsorbers, results of the adsorber bed outlet volatile organic compounds concentration measurements specified in §63.11940(e)(2).

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

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

(8) You must include the information specified in paragraphs (b)(8)(i) and (ii) of this section for your wastewater streams.

(i) Results of daily vinyl chloride and 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 or 2 to this subpart.

(ii) If you must comply with §63.11965, then you must include any other applicable information that is required by the reporting requirements specified in §63.146.

(9) For closed vent systems subject to the requirements of §63.11930, you must include the information specified in paragraphs (b)(9)(i) through (iv) of this section, as applicable.

(i) As applicable, records as specified in §63.11930(g)(1)(i) for all times when flow was detected in the bypass line, the vent stream was diverted from the control device, or the flow indicator was not operating.

(ii) As applicable, records as specified in §63.11930(g)(1)(ii) for all occurrences of all periods when a bypass of the system was indicated (the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has been broken).

(iii) Records of all times when monitoring of the system was not performed as specified in §63.11930(d) and (e), or repairs were not performed as specified in §63.11930(f), or records were not kept as specified in §63.11930(g)(2).

(iv) Records of each time an alarm on a closed vent system operating in vacuum service is triggered as specified in §63.11930(h) including the cause for the alarm and the corrective action taken.

(10) Closed vent system in vacuum service, bypass deviation, or pressure vessel closure device deviation report. 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 but not in vacuum service, as specified in §63.11910(c)(4), §63.11930(c) or §63.11930(h), you must submit to the Administrator the following information:

(i) The source, nature and cause of the discharge.

(ii) The date, time and duration of the discharge.

(iii) An estimate of the quantity of vinyl chloride and total HAP emitted during the discharge and the method used for determining this quantity.

(iv) The actions taken to prevent this discharge.

(v) The measures adopted to prevent future such discharges

(11) *Affirmative defense report.* If you seek to assert an affirmative defense, as provided in §63.11895, then you must submit a written report as specified in §63.11895(b) to demonstrate, with all necessary supporting documentation, that you have met the requirements set forth in §63.11895(a).

(12) *Overlap with Title V reports.* 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) *Other notifications and reports.* You must submit the other notification and reports, as specified in paragraphs (c)(1) through (9) of this section, as applicable.

(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 inspections.

(2) *Batch precompliance report.* You must submit a batch precompliance report at least 6 months prior to the compliance date of this subpart 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 limitations 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.

(3) *Other control device reporting provisions.* If you are using a control device other than those listed in this subpart, then you must submit the information as specified in paragraphs (c)(3)(i) through (iii) of this section.

(i) A description of the proposed control device.

(ii) A description of the parameter(s) to be monitored to ensure the control device is operated in conformance with its design and achieves the performance level as specified in this subpart and an explanation of the criteria used to select the parameter(s).

(iii) The frequency and content of monitoring, recording, and reporting if monitoring and recording is not continuous, or if the compliance report information, as specified in paragraph (b)(4)(i)(A) of this section, will not contain 3-hour block average values when the monitored parameter value does not meet the established operating limit. The rationale for the proposed monitoring, recording and reporting system must be included.

(4) *Request for approval to use alternative monitoring methods.* Prior to your initial notification of compliance status, you may submit requests for approval to use alternatives to the continuous operating parameter monitoring specified in this rule, as provided for in §63.11940(h), following the same procedure as specified in §63.8. The information specified in paragraphs (c)(4)(i) and (ii) of this section must be included.

(i) A description of the proposed alternative system.

(ii) Information justifying your request for an alternative method, such as the technical or economic infeasibility, or the impracticality, of the affected source using the required method.

(5) *Request for approval to monitor alternative parameters.* Prior to your initial notification of compliance status, you may submit requests for approval to monitor a different parameter than those established in §63.11935(d), following the same procedure as specified for alternative monitoring methods in §63.8. The information specified in paragraphs (c)(5)(i) through (iii) of this section must be included in the request.

(i) A description of the parameter(s) to be monitored to ensure the control technology or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit and an explanation of the criteria used to select the parameter(s).

(ii) A description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation of the control device, the schedule for this demonstration, and a statement that you will establish an operating limit for the monitored parameter(s) as part of the notification of compliance status if required under this subpart, unless this information has already been submitted.

(iii) The frequency and content of monitoring, recording, and reporting, if monitoring and recording is not continuous. The rationale for the proposed monitoring, recording, and reporting system must be included.

(6) [Reserved]

(7) *Pressure relief device deviation report.* If any pressure relief device in HAP service has discharged to the atmosphere as specified in §63.11915(c), then you must submit to the Administrator within 10 days of the discharge the following information:

(i) The source, nature, and cause of the discharge.

(ii) The date, time, and duration of the discharge.

(iii) An estimate of the quantity of vinyl chloride and total HAP emitted during the discharge and the method used for determining this quantity.

(iv) The actions taken to prevent this discharge.

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

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

(9) *Data submittal.* (i) Within 60 days after the date of completing each performance test (see §63.2) required by this subpart, you must submit the results of performance tests electronically to the EPA's WebFIRE database by using the Compliance and Emissions Data Reporting Interface (CEDRI) that is accessed through the EPA's Central Data Exchange (CDX) (*http://www.epa.gov/cdx*). Performance test data must be submitted in the file format generated through use of the EPA's Electronic Reporting Tool (ERT) (see *http://www.epa.gov/ttn/chief/ert/ert_tool.html*). Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically to WebFIRE. Owners or operators who claim that some of the information being submitted for performance tests is confidential business information (CBI) must submit a complete ERT file including information claimed to be CBI on a compact disk or other commonly used electronic storage media (including, but not limited to, flash drives) to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404–02, 4930 Old Page Rd., Durham, NC 27703. The same ERT file with the CBI omitted must be submitted to the EPA via CDX as described earlier in this paragraph. At the discretion of the delegated authority, you must also submit these reports, including the confidential business information, to the delegated authority in the format specified by the delegated authority.

(ii) Within 60 days after the date of completing each CEMS performance evaluation test (see §63.2), you must submit the relative accuracy test audit data electronically into the EPA's CDX by using the ERT, as mentioned in

paragraph (c)(9)(i) of this section. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically to the EPA's CDX.

(iii) All reports required by this subpart not subject to the requirements in paragraphs (c)(9)(i) and (ii) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. The Administrator or the delegated authority may request a report in any form suitable for the specific case (*e.g.*, by electronic media such as Excel spreadsheet, on CD or hard copy). The Administrator retains the right to require submittal of reports subject to paragraphs (c)(9)(i) and (ii) of this section in paper format.

§ 63.11990 What records must I keep?

You must keep records as specified in paragraphs (a) through (j) of this section, as applicable.

(a) *Copies of reports.* You must keep a copy of each notification and report that you submit to comply with this subpart, including all documentation supporting any notification or report. You must also keep copies of the current versions of the site-specific performance evaluation test plan, site-specific monitoring plan, and the equipment leak detection and repair plan.

(b) *Storage vessels.* For storage vessels, you must maintain the records specified in paragraphs (b)(1) through (6) of this section.

(1) You must keep a record of the dimensions of the storage vessel, an analysis of the capacity of the storage vessel and an identification of the liquid stored.

(2) Inspection records for fixed roofs complying with § 63.11910 including the information specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) Record the date of each inspection required by § 63.11910(a)(3).

(ii) For each defect detected during an inspection required by § 63.11910(a)(3), record the location of the defect, a description of the defect, the date of detection and corrective action taken to repair the defect. In the event that repair of the defect is delayed in accordance with § 63.11910(a)(4)(ii), also record the reason for the delay and the date that completion of repair of the defect is expected.

(3) [Reserved]

(4) For pressure vessels, you must keep the records specified in paragraph (c) of this section for each pressure vessel.

(5) For internal and external floating roof storage vessels, you must maintain the records required in § 63.1065 of subpart WW of this part.

(6) For fixed roof storage vessels that route emissions through a closed vent system to a control device, during periods of planned routine maintenance of a control device, record the day and time at which planned routine maintenance periods begin and end, and the type of maintenance performed on the control device. If you need more than 240 hr/yr, keep a record that explains why additional time up to 360 hr/yr was needed and describes how you minimized the amount of additional time needed.

(c) *Equipment leaks.* For equipment leaks, you must maintain the records specified in § 63.1038 of subpart UU of this part for equipment leaks and a record of the information specified in § 63.11930(g)(4) for monitoring instrument calibrations conducted according to § 63.11930(e)(2).

(d) *Heat exchange systems.* For a heat exchange system subject to this subpart, you must keep the records specified in paragraphs (d)(1) through (6) of this section.

(1) Identification of all heat exchangers at the facility and the measured or estimated average annual HAP concentration of process fluid or intervening cooling fluid processed in each heat exchanger.

(2) Identification of all heat exchange systems that are in HAP service. For each heat exchange system that is subject to this subpart, you must include identification of all heat exchangers within each heat exchange system, identification of the individual heat exchangers in HAP service within each heat exchange system, and for closed-loop recirculation systems, the cooling tower included in each heat exchange system.

(3) Identification of all heat exchange systems that are exempt from the monitoring requirements according to the provisions in § 63.11920(b) and the provision under which the heat exchange system is exempt.

(4) Results of the following monitoring data for each monitoring event:

(i) Date/time of event.

(ii) Heat exchange exit line flow or cooling tower return line flow at the sampling location, gallons/minute.

(iii) Monitoring method employed.

(iv) The measured cooling water concentration for each of target analyte (parts per billion by weight).

(v) Calibration and recovery information identified in the test method used.

(5) The date when a leak was identified and the date when the heat exchanger was repaired or taken out of service.

(6) If a repair is delayed, the reason for the delay, the schedule for completing the repair, and the estimate of potential emissions for the delay of repair.

(e) *Process vent monitoring.* You must include the records specified in paragraphs (e)(1) through (4) of this section, as applicable, for process vent monitoring.

(1) Continuous records. Where this subpart requires a continuous record using CEMS or CPMS, you must maintain, at a minimum, the records specified in § 63.10(b)(2)(vii)(A).

(2) Excluded data. In any average computed to determine compliance, you must exclude monitoring data recorded during periods specified in paragraphs (e)(2)(i) through (iii) of this section.

(i) Periods of non-operation of the process unit (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(ii) Periods of no flow to a control device.

(iii) Monitoring system malfunctions, repairs associated with monitoring system malfunctions or required monitoring system quality assurance or control activities, as specified in § 63.11890(c)(2).

(3) Records of calculated emission and operating parameter values. You must retain for 5 years, a record of CEMS and CPMS data as specified in paragraphs (e)(3)(i) and (ii) of this section, unless an alternative recordkeeping system has been requested and approved.

(i) Except as specified in paragraph (e)(3)(ii) of this section, retain for 5 years, the records of the average values for each continuously monitored operating parameter and pollutant specified in §§ 63.11925(e)(3)(ii) and 63.11925(e)(4)(ii)(B) for CEMS and CPMS.

(ii) In lieu of calculating and recording the average value specified in paragraphs (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 or 2 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.

(4) Information to be included in records. You must keep records of each operating scenario as specified in paragraphs (e)(4)(i) through (viii) of this section, as applicable.

(i) You must keep a schedule or log of operating scenarios, updated each time a different operating scenario is put into effect.

(ii) A description of the process and the type of process components used.

(iii) An identification of related process vents including their associated emissions episodes.

(iv) The applicable control requirements of this subpart for process vents.

(v) The control device, including a description of operating and testing conditions.

(vi) Combined emissions that are routed to the same control device.

(vii) The applicable monitoring requirements of this subpart and any operating limit that assures compliance for all emissions routed to the control device.

(viii) Calculations and engineering analyses required to demonstrate compliance.

(f) *Process vents.* You must include the records specified in paragraphs

(f)(1) and (2) of this section, as applicable, for process vents.

(1) Records of performance tests as required in § 63.10(b)(2)(viii). You must also collect the applicable control device operating parameters required in § 63.11940 over the full period of the performance test.

(2) If you use a control device to comply with this subpart and you are required to use CPMS, then you must keep up-to-date and readily accessible records for your process vents as specified in paragraphs (f)(2)(i) through (iv) of this section, as applicable.

(i) If you use a flow indicator, then you must keep records of periods of no flow to the control device, including the start and stop time and dates of periods of flow and no flow.

(ii) If you use a catalytic oxidizer for which you have selected the alternative monitoring specified in § 63.11940(b)(3), then you must also maintain records of the results of the annual catalyst sampling and inspections required by § 63.11940(b)(3)(i) and (ii) including any subsequent corrective actions taken.

(iii) If you use a regenerative adsorber as specified in § 63.11940(d), then the records specified in paragraphs (f)(2)(iii)(A) through (H) of this section, as applicable, must be kept.

(A) Records of total regeneration stream mass flow for each adsorber-bed regeneration cycle.

(B) Records of the temperature of the adsorber bed after each regeneration and within 15 minutes of completing any cooling cycle.

(C) For non-vacuum and non-steam regeneration systems, records of the temperature of the adsorber bed during each regeneration except during any temperature regulating (cooling or warming to bring bed temperature closer to vent gas temperature) portion of the regeneration cycle.

(D) If adsorber regeneration vacuum is monitored pursuant to § 63.11940(d)(4), then you must keep records of the vacuum profile over time and the amount of time the vacuum level is below the minimum vacuum target for each adsorber-bed regeneration cycle.

(E) Records of the regeneration frequency and duration.

(F) Daily records of the verification inspections, including the visual observations and/or any activation of an automated alarm or shutdown system with a written entry into a log book or other permanent form of record.

(G) Records of the maximum volatile organic compound or HAP outlet concentration observed over the last 5 minutes of the adsorption cycle for each adsorber bed. Records must be weekly or for every regeneration cycle if the regeneration cycle is greater than 1 week.

(H) Records of the date and time the adsorbent had last been replaced.

(iv) If you use a non-regenerative adsorber as specified in § 63.11940(e), then the records specified in paragraphs (f)(2)(iv)(A) through (C) of this section, as applicable, must be kept.

(A) A record of the average life of the bed, as determined by § 63.11940(e)(1), including the date the average life was determined.

(B) Daily, weekly, or monthly records of the maximum volatile organic compound or HAP outlet concentration, as specified by § 63.11940(e)(2).

(C) Records of bed replacement including the date and time the adsorbent had last been replaced, and the date and time in which breakthrough is detected.

(g) *Closed vent systems.* You must keep the records specified in paragraphs (g)(1) through (6) of this section, and you must record any additional information as specified in § 63.11930, as applicable.

(1) Each alarm triggered because flow was detected in a bypass as specified in § 63.11930(g)(1)(i).

(2) Inspections of seals or closure mechanisms as specified in § 63.11930(g)(1)(ii).

(3) Copies of compliance reports for closed vent system leak inspections as specified in § 63.11985(b)(9) and § 63.11930(g)(2) and (3).

(4) Instrument calibration records as specified in § 63.11930(g)(4).

(5) Unsafe-to-inspect equipment as specified in § 63.11930(g)(5).

(6) Pressure alarms as specified by § 63.11930(h)(2) and (3).

(h) *Resin strippers.* For resin strippers, you must maintain the records specified in paragraphs (h)(1) and (2) of this section.

(1) All resin sampling data, including daily measurements of the concentration of vinyl chloride and monthly measurements of the total non-vinyl chloride organic HAP compounds in the stripped resin for each type and grade of resin produced. Each sample must be identified by the resin type and resin grade, the date and time the sample was taken, identification of the resin stripper from which the sample was taken, and the corresponding quantity (pounds) of resin processed by the stripper for the batch or over the time period represented by the sample.

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

(i) *Process wastewater.* For treatment processes, you must maintain the records specified in paragraphs (i)(1) through (5) of this section.

(1) A description of the process wastewater generation activities and treatment process.

(2) Records of the treatment determinations specified in §63.11965(b) for each wastewater stream and the type of treatment applied if required in §63.11965(c).

(3) Records of the initial performance test specified in §63.11970(a) and (b).

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

(5) You must keep any other applicable records that are required by the recordkeeping requirements specified in §63.147 of subpart G of this part.

(j) *Other emission sources.* You must keep the records specified in paragraphs (j)(1) and (2) of this section.

(1) All engineering calculations, testing, sampling, and monitoring results and data specified in §63.11955.

(2) Each occurrence that you do not comply with the requirements in §63.11955.

§63.11995 In what form and how long must I keep my records?

(a) You must keep records for 5 years in a form suitable and readily available for expeditious review, as specified in §63.10(b)(1).

(b) You must keep each record on site for at least 2 years, as specified in §63.10(b)(1). You can keep the records off site for the remaining 3 years. Records may be maintained in hard copy or computer-readable format including, but not limited to, on paper, microfilm, hard disk drive, floppy disk, compact disk, magnetic tape or microfiche.

§63.12000 Who implements and enforces this subpart?

(a) This subpart can be implemented and enforced by the Administrator, as defined in §63.2, or a delegated authority such as your state, local or tribal agency. If the Administrator has delegated authority to your state, local or tribal agency, then that agency (as well as the Administrator) has the authority to implement and enforce this subpart. You should contact your EPA Regional Office to find out if this subpart is delegated to your state, local or tribal agency.

(b) In delegating implementation and enforcement authority of this subpart to a state, local or tribal agency, the authorities listed in paragraphs (b)(1) through (4) of this section are retained by the Administrator and are not transferred to the state, local or tribal agency, however, the EPA retains oversight of this subpart and can take enforcement actions, as appropriate.

(1) Approval of alternatives to the emission limits, operating limits, and work practice standards specified in this subpart.

(2) Approval of a major change to test methods, as defined in §63.90, approval of any proposed analysis methods, and approval of any proposed test methods.

(3) Approval of a major change to monitoring, as defined in §63.90.

(4) Approval of a major change to recordkeeping and reporting, as defined in §63.90.

DEFINITIONS

§ 63.12005 What definitions apply to this subpart?

Terms used in this subpart are defined in the Clean Air Act, in § 63.2, and in this section, as follows:

Affirmative defense means, in the context of an enforcement proceeding, a response or defense put forward by a defendant, regarding which the defendant has the burden of proof, and the merits of which are independently and objectively evaluated in a judicial or administrative proceeding.

Batch emission episode means a discrete venting episode that is associated with a single unit operation. A unit operation may have more than one batch emission episode. For example, a displacement of vapor resulting from the charging of a vessel with HAP will result in a discrete emission episode that will last through the duration of the charge and will have an average flowrate equal to the rate of the charge. If the vessel is then heated, there will also be another discrete emission episode resulting from the expulsion of expanded vapor. Both emission episodes may occur in the same vessel or unit operation. There are possibly other emission episodes that may occur from the vessel or other process components, depending on process operations.

Batch operation means a noncontinuous operation involving intermittent or discontinuous feed into process components, and, in general, involves the emptying of the process components after the operation ceases and prior to beginning a new operation. Addition of raw material and withdrawal of product do not occur simultaneously in a batch operation.

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 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.

Bottoms receiver means a tank that collects bottoms from continuous distillation before the stream is sent for storage or for further downstream processing. A rundown tank is an example of a bottoms receiver.

Bulk process means a process for producing polyvinyl chloride resin that is characterized by a two-step anhydrous polymerization process: the formation of small resin particles in a pre-polymerization reactor using small amounts of vinyl chloride monomer, an initiator, and agitation; and the growth of the resin particles in a post-polymerization reactor using additional vinyl chloride monomer. Resins produced using the bulk process are referred to as bulk resins.

Bypass means diverting a process vent or closed vent system stream to the atmosphere such that it does not first pass through an emission control device.

Calendar year means the period between January 1 and December 31, inclusive for a given year.

Capacity means the nominal figure or rating given by the manufacturer of the storage vessel, condenser, or other process component.

Car-seal means a seal that is placed on a device that is used to change the position of a valve (e.g., from opened to closed) in such a way that the position of the valve cannot be changed without breaking the seal.

Closed vent system means a system that is not open to the atmosphere and is composed of piping, ductwork, connections, and, if necessary, flow inducing devices that collect or transport gas or vapor from an emission point to a control device.

Combustion device means an individual unit used for the combustion of organic emissions, such as a flare, incinerator, process heater, or boiler.

Conservation vent means an automatically operated (*e.g.*, weight-loaded or spring-loaded) safety device used to prevent the operating pressure of a storage vessel from exceeding the maximum allowable working pressure of the process component. Conservation

vents must be designed to open only when the operating pressure of the storage vessel exceeds the maximum allowable working pressure of the process component. Conservation vents open and close to permit only the intake or outlet relief necessary to keep the storage vessel within permissible working pressures, and reseal automatically.

Container means a portable unit in which a material can be stored, transported, treated, disposed of or otherwise handled. Examples of containers include, but are not limited to, drums, pails, and portable cargo containers known as ''portable tanks'' or ''totes.'' Container does not include transport vehicles or barges.

Continuous emission monitoring system (CEMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this subpart, used to sample, condition (if applicable), analyze, and provide a record of emissions.

Continuous operation means any operation that is not a batch operation.

Continuous parameter monitoring system (CPMS) means the total equipment that may be required to meet the data acquisition and availability requirements of this part, used to sample, condition (if applicable), analyze, and provide a record of process or control system parameters.

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 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.

Continuous PVCPU operation means any operation that is not a batch operation or an operation that generates a miscellaneous process vent.

Continuous record means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in §63.11990(e)(1).

Control device means, with the exceptions noted in this definition, a combustion device, recovery device, recapture device or any combination of these devices used to comply with this subpart. Process condensers are not control devices.

Control system means the combination of the closed vent system and the control devices used to collect and control vapors or gases from a regulated emission source.

Cooling tower means a heat removal device used to remove the heat absorbed in circulating cooling water systems by transferring the heat to the atmosphere using natural or mechanical draft.

Cooling tower return line means the main water trunk lines at the inlet to the cooling tower before exposure to the atmosphere.

Corrective action plan means a description of all reasonable interim and long-term measures, if any, that are available, and an explanation of why the selected corrective action is the best alternative, including, but not limited to, any consideration of cost-effectiveness.

Day means a calendar day, unless otherwise specified in this subpart.

Dioxin/furans means total tetra-through octachlorinated dibenzo-p-dioxins and dibenzofurans.

Dispersion process means a process for producing polyvinyl chloride resin that is characterized by the formation of the polymers in soap micelles that contain small amounts of vinyl chloride

monomer. Emulsifiers are used to disperse vinyl chloride monomer in the water phase. Initiators used in the dispersion process are soluble in water. Resins produced using the dispersion process are referred to as latex or dispersion resins.

Empty or emptying means the partial or complete removal of stored liquid from a storage vessel. Storage vessels that contain liquid only as a result of the liquid clinging to the walls or bottoms, or resting in pools due to bottom irregularities, are considered completely empty.

Equipment means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector and instrumentation system in HAP service; and any control devices or systems used to comply with this subpart.

Fill or filling means the introduction of liquid into a storage vessel, but not necessarily to capacity.

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

Fixed roof storage vessel means a vessel with roof that is mounted (*i.e.*, permanently affixed) on a storage vessel and that does not move with fluctuations in stored liquid level.

Flow indicator means a device that indicates whether gas flow is, or whether the valve position would allow gas flow to be, present in a line.

Gasholder means a surge control vessel with a bell that is floating in a vessel filled with water that is used to store gases from the PVC production process prior to being recovered or sent to a process vent control device. The bell rises and falls as low-pressure gases enter and leave the space beneath the bell and the water provides a seal between the enclosed gas within the floating bell and the ambient air.

Grade means the subdivision of PVC resin that describes it as a unique resin, *i.e.*, the most exact description of a type of resin with no further subdivision. Examples include low molecular weight suspension resins and general purpose suspension resins.

Hard-piping means pipes or tubing that are manufactured and properly installed using good engineering judgment and an appropriate standard method published by a consensus-based standards organization if such a method exists or you may use an industry standard practice. Consensus-based standards organizations include, but are not limited to, American National Standards Institute (ANSI, 1819 L Street NW., 6th floor, Washington, DC 20036, (202) 293–8020, *http://www.ansi.org*).

Heat exchange system means a device or collection of devices used to transfer heat from process fluids to water without intentional direct contact of the process fluid with the water (*i.e.*, non-contact heat exchanger) and to transport and/or cool the water in a closed-loop recirculation system (cooling tower system) or a once-through system (*e.g.*, river or pond water). For closed-loop recirculation systems, the heat exchange system consists of a cooling tower, all heat exchangers that are serviced by that cooling tower and all water lines to and from the heat exchanger(s). For once-through systems, the heat exchange system consists of one or more heat exchangers servicing an individual process unit and all water lines to and from the heat exchanger(s). Intentional direct contact with process fluids results in the formation of a wastewater.

Heat exchanger exit line means the cooling water line from the exit of one or more heat exchangers (where cooling water leaves the heat exchangers) to either the entrance of the cooling tower return line or prior to exposure to the atmosphere or mixing with non-cooling water streams, in, as an example, a once-through cooling system, whichever occurs first.

In HAP service means that a process component either contains or contacts a liquid that is at least 5-percent HAP by weight or a gas that is at least 5 percent by volume HAP as determined according to the provisions of § 63.180(d). For the purposes of this definition, the term ''organic HAP'' as used in § 63.180(d) means HAP. The provisions of § 63.180(d) also specify how to

determine that a process component is not in HAP service.

In vacuum service means that the process component is operating at an internal pressure that is at least 5 kilopascals (kPa) (0.7 pounds per square inch absolute) below ambient pressure.

Incinerator means an enclosed combustion device with an enclosed fire box that is used for destroying organic compounds. Auxiliary fuel may be used to heat waste gas to combustion temperatures. Any energy recovery section present is not physically formed into one manufactured or assembled unit with the combustion section; rather, the energy recovery section is a separate section following the combustion section and the two are joined by ducts or connections carrying flue gas. This energy recovery section limitation does not apply to an energy recovery section used solely to preheat the incoming vent stream or combustion air.

Maintenance wastewater means wastewater generated by the draining of process fluid from components in the PVCPU into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated during planned and unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewaters include descaling of heat exchanger tubing bundles, hydroblasting PVCPU process components such as polymerization reactors, vessels and heat exchangers, draining of low legs and high point bleeds, draining of pumps into an individual drain system, draining of portions of the PVCPU for repair and water used to wash out process components or equipment after the process components or equipment has already been opened to the atmosphere and has met the requirements of § 63.11955.

Maximum representative operating conditions means process operating conditions that result in the most challenging condition for the control device. The most challenging condition for the control device may include, but is not limited to, the highest or lowest HAP mass loading rate to the control device, the highest or lowest HAP mass loading rate of constituents that approach the limits of solubility for scrubbing media, the highest or lowest HAP mass loading rate of constituents that approach limits of solubility for scrubbing media.

Maximum true vapor pressure means the equilibrium partial pressure exerted by the total HAP in the stored or transferred liquid at the temperature equal to the highest calendar-month average of the liquid storage or transfer temperature for liquids stored or transferred above or below the ambient temperature or at the local maximum monthly average temperature as reported by the National Weather Service for liquids stored or transferred at the ambient temperature, as determined by any one of the following methods or references:

(1) In accordance with methods described in API MPMS 19.2 (incorporated by reference, see § 63.14).

(2) As obtained from standard reference texts.

(3) As determined by ASTM D2879–83 or ASTM D2879–96 (incorporated by reference, see § 63.14).

(4) Any other method approved by the Administrator.

Miscellaneous vent means gaseous emissions from samples, loading and unloading lines, slip gauges, process wastewater treatment systems and pressure relief devices that are routed through a closed vent system to a control device and that are not equipment leaks.

Nonstandard batch means a batch process that is operated outside of the range of operating conditions that are documented in an existing operating scenario, but is still a reasonably anticipated event. For example, a nonstandard batch occurs when additional processing or processing at different operating conditions must be conducted to produce a product that is normally produced under the conditions described by the standard batch. A nonstandard batch may be necessary as a result of a malfunction, but it is not itself a malfunction.

Operating block means a period of time that is equal to the time from the beginning to end of batch process operations within a process.

Operating day means a 24-hour period between 12 midnight and the following

midnight during which PVC is produced at any time in the PVCPU. It is not necessary for PVC to be produced for the entire 24-hour period.

Operating scenario means, for the purposes of reporting and recordkeeping, any specific operation of a regulated process as described by reports specified in § 63.11985(b)(4)(ii) and records specified in § 63.11990(e)(4).

Plant site means all contiguous or adjoining property that is under common control, including properties that are separated only by a road or other public right-of-way. Common control includes properties that are owned, leased or operated by the same entity, parent entity, subsidiary or any combination thereof.

Polymerization reactor means any vessel in which vinyl chloride is partially or totally polymerized into polyvinyl chloride. For bulk processes, the polymerization reactor includes pre-polymerization reactors and post-polymerization reactors.

Polyvinyl chloride means either polyvinyl chloride homopolymer or polyvinyl chloride copolymer.

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 tanks 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. A PVCPU does not include chemical manufacturing process units, as defined in § 63.101, that produce vinyl chloride monomer or other raw materials used in the PVC polymerization process.

Polyvinyl chloride copolymer means a synthetic thermoplastic polymer that is derived from the simultaneous polymerization of vinyl chloride and another monomer such as vinyl acetate. Polyvinyl chloride copolymer is produced by different processes, including, but not limited to, suspension, dispersion/emulsion, suspension blending, and solution processes.

Polyvinyl chloride homopolymer means a synthetic thermoplastic polymer that is derived from the polymerization of vinyl chloride and has the general chemical structure (-H2CCHCl-)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, dispersion/emulsion, blending, and bulk processes.

Pressure relief device means a safety device used to prevent operating pressures from exceeding the maximum allowable working pressure of the process component. A common pressure relief device is a spring-loaded pressure relief valve.

Pressure vessel means a vessel that is used to store liquids or gases and is designed not to vent to the atmosphere as a result of compression of the vapor headspace in the pressure vessel during filling of the pressure vessel to its design capacity.

Process change means an addition to or change in a PVCPU and/or its associated process components that creates one or more emission points or changes the characteristics of an emission point such that a new or different emission limit, operating parameter limit, or work practice requirement applies to the added or changed emission points. Examples of process changes include, but are not limited to, changes in production capacity, production rate, or catalyst type, or whenever there is replacement, removal, or addition of recovery device components. For purposes of this definition, process changes do not include process upsets, changes that do not alter the process component configuration and operating conditions, and unintentional, temporary process changes. A process change does not include moving within a range of conditions identified in the

standard batch, and a nonstandard batch does not constitute a process change.

Process component means any unit operation or group of units 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, as defined in this section.

Process condenser means a condenser whose primary purpose is to recover material as an integral part of a batch process. All condensers recovering condensate from a batch 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 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 tank means a tank or other vessel (*e.g.*, pressure vessel) that is used within an affected source to both: (1) Collect material discharged from a feedstock storage vessel, process tank, or other PVCPU process component, and (2) discharge the material to another process tank, process component, byproduct storage vessel, or product storage vessel.

Process unit means the process components assembled and connected by pipes or ducts to process raw and/or intermediate materials and to manufacture an intended product. For the purpose of this subpart, process unit includes, but is not limited to, polyvinyl chloride production process.

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-only process vent or a PVC-combined process vent.

Process wastewater means wastewater that comes into direct contact with HAP or results from the production or use of any raw material, intermediate product, finished product, by-product, or waste product containing HAP, but that has not been discharged untreated as wastewater. Examples are product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; water used to cool or quench organic vapor streams through direct contact; water discarded from a control device; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics. Gasholder seal water is not process wastewater until it is removed from the gasholder.

Process wastewater treatment system means a specific technique or collection of techniques that remove or destroy the organics in a process wastewater stream to comply with §§ 63.11965, 63.11970, and 63.11975.

Product means a polymer produced using the same monomers and varying in additives (*e.g.*, initiators, terminators, etc.); catalysts; or in the relative proportions of monomers, 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 another source category prior to being controlled or emitted to the atmosphere.

PVC-only process vent means a process vent that originates from a PVCPU and is not combined with a process vent originating from another source category prior to being controlled or emitted to the atmosphere.

Recipe means a specific composition from among the range of possible compositions that may occur within a product, as defined in this section. A recipe is determined by the proportions of monomers and, if present, other reactants and additives that are used to make the recipe.

Recovery device means an individual process component 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. Examples of process components that may be recovery devices include absorbers, adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers (*e.g.*, wastewater steam and vacuum strippers), or thin-film evaporation units. For purposes of this subpart, recovery devices are control devices.

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, is inspected as specified in §63.11930(f) to verify that emissions from the equipment are below the applicable leak definition.

Resin stripper means a unit that removes organic compounds from a raw polyvinyl chloride and copolymer product. In the production of a polymer, stripping is a discrete step that occurs after the polymerization reaction and before drying or other finishing operations. Examples of types of stripping include steam stripping, vacuum stripping, or other methods of devolatilization. For the purposes of this subpart, devolatilization that occurs in dryers or other finishing operations is not resin stripping. Resin stripping may occur in a polymerization reactor or in a batch or continuous stripper separate from the polymerization reactor where resin stripping occurs.

Root cause analysis means an assessment conducted through a process of investigation to determine the primary cause, and any other significant contributing cause(s), of a discharge of gases in excess of specified thresholds.

Sensor means a device that measures a physical quantity or the change in a physical quantity, such as temperature, pressure, flow rate, pH, or liquid level.

Slip gauge means a gauge that has a probe that moves through the gas/liquid interface in a storage vessel and indicates the level of product in the vessel by the physical state of the material the gauge discharges.

Solution process means a process for producing polyvinyl chloride copolymer resin that is characterized by the anhydrous formation of the polymer through precipitation. Polymerization occurs in an organic solvent in the presence of an initiator where vinyl chloride monomer and co-monomers are soluble in the solvent, but the polymer is not. The PVC copolymer is a granule suspended in the solvent, which then precipitates out of solution. Emulsifiers and suspending agents are not used in the solution process. PVC copolymer resins produced using the solution process are referred to as solution resins.

Specific gravity monitoring device means a unit of equipment used to monitor specific gravity and having a minimum accuracy of ±0.02 specific gravity units.

Standard procedure means a formal written procedure officially adopted by the plant owner or operator and available on a routine basis to those persons responsible for carrying out the procedure.

Storage vessel means a tank or other vessel (*e.g.*, pressure vessel) that is part of an affected source and is used to store a gaseous, liquid, or solid feedstock, byproduct, or product that contains organic HAP. Storage vessel does not include:

(1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;

(2) Process tanks;

(3) Vessels with capacities smaller than 10,040 gallons;

(4) Vessels storing organic liquids that contain organic HAP only as impurities;

(5) Bottoms receiver tanks;

(6) Surge control vessels; and

(7) Wastewater storage tanks. Wastewater storage tanks are covered under the wastewater provisions.

Stripped resin means the material exiting the resin stripper that contains polymerized vinyl chloride.

Supplemental combustion air means the air that is added to a vent stream after the vent stream leaves the unit operation. Air that is part of the vent stream as a result of the nature of the unit operation is not considered supplemental combustion air. Air required to operate combustion device burner(s) is not considered supplemental combustion air. Air required to ensure the proper operation of catalytic oxidizers, to include the intermittent addition of air upstream of the catalyst bed to maintain a minimum threshold flow rate through the catalyst bed or to avoid excessive temperatures in the catalyst bed, is not considered to be supplemental combustion air.

Surge control vessel means feed drums, recycle drums, and intermediate vessels used as a part of any continuous operation. Surge control vessels are used within an affected source when in-process storage, mixing, or management of flow rates or volumes is needed to introduce material into continuous operations. Surge control vessels also include gasholders.

Suspension blending process means a process for producing polyvinyl chloride resin that is similar to the suspension polymerization process, but employs a rate of agitation that is significantly higher than the highest range for non-blending suspension resins. The suspension blending process uses a recipe that creates extremely small resin particles, generally equal to or less than 100 microns in size, with a glassy surface and very little porosity. The suspension blending process concentrates the resins using a centrifuge that is specifically designed to handle these small particles. Polyvinyl chloride resins produced using the suspension blending process are referred to as suspension blending resins and are typically blended with dispersion resins.

Suspension process means a process for producing polyvinyl chloride resin that is characterized by the formation of the polymers in droplets of liquid vinyl chloride monomer or other comonomers suspended in water. The droplets are formed by agitation and the use of protective colloids or suspending agents. Initiators used in the suspension process are soluble in vinyl chloride monomer. Polyvinyl chloride resins produced using the suspension process are referred to as suspension resins.

Table 10 HAP means a HAP compound listed in table 10 of this subpart.

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).

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/emulsion, suspension blending, bulk, and solution processes.

Unloading operations means the transfer of organic liquids from a transport vehicle, container, or storage vessel to process components within the affected source.

Wastewater means process wastewater and maintenance wastewater. The following are not considered wastewater for the purposes of this subpart:

(1) Stormwater from segregated sewers;

(2) Water from fire-fighting and deluge systems, including testing of such systems;

(3) Spills;

(4) Water from safety showers;

(5) Samples of a size not greater than reasonably necessary for the method of analysis that is used;

(6) Equipment leaks;

(7) Wastewater drips from procedures such as disconnecting hoses after cleaning lines; and

(8) Noncontact cooling water.

Wastewater stream means a stream that contains only wastewater as defined in this section.

Work practice standard means any design, equipment, work practice or operational standard, or combination thereof, that is promulgated pursuant to section 112(h) of the Clean Air Act.

§§ 63.12006–63.12099 [Reserved]

TABLE 1 TO SUBPART HHHHHHH 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 . . .
1. PVC-only process vents[a]	a. Vinyl chloride	All resin types	6.0 parts per million by volume (ppmv).
	b. Total hydrocarbons	All resin types	9.7 ppmv measured as propane.
	c. Total organic HAP[b]	All resin types	56 ppmv.
	d. Hydrogen chloride	All resin types	78 ppmv.
	e. Dioxins/furans (toxic equivalency basis).	All resin types	0.038 nanograms per dry standard cubic meter (ng/dscm).
2. PVC-combined process vents[a].	a. Vinyl chloride	All resin types	1.1 ppmv.
	b. Total hydrocarbons	All resin types	4.2 ppmv measured as propane.
	c. Total organic HAP[b]	All resin types	9.8 ppmv.
	d. Hydrogen chloride	All resin types	380 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 parts per million by weight (ppmw).
		ii. Dispersion resin	1300 ppmw.
		iii. Suspension resin	37 ppmw.
		iv. Suspension blending resin	140 ppmw.
		v. Copolymer resin	790 ppmw.
	b. Total non-vinyl chloride organic HAP.	i. Bulk resin	170 ppmw.
		ii. Dispersion resin	240 ppmw.
		iii. Suspension resin	670 ppmw.
		iv. Suspension blending resin	500 ppmw.
		v. Copolymer resin	1900 ppmw.
4. Process Wastewater	a. Vinyl chloride	All resin types	6.8 ppmw.
	b. Total non-vinyl chloride organic HAP.	All resin types	110 ppmw.

[a] Emission limits at 3 percent oxygen, dry basis.
[b] Total organic HAP is alternative compliance limit for THC.

TABLE 2 TO SUBPART HHHHHHH 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 . . .
1. PVC-only process vents[a]	a. Vinyl chloride	All resin types	0.56 ppmv.
	b. Total hydrocarbons	All resin types	7.0 ppmv measured as propane.
	c. Total organic HAP[b]	All resin types	5.5 ppmv.
	d. Hydrogen chloride	All resin types	0.17 ppmv.
	e. Dioxins/furans (toxic equivalency basis).	All resin types	0.038 ng/dscm.
2. PVC-combined process vents[a].	a. Vinyl chloride	All resin types	0.56 ppmv.
	b. Total hydrocarbons	All resin types	2.3 ppmv measured as propane.

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 . . .
	c. Total organic HAP[b]	All resin types	5.5 ppmv.
	d. Hydrogen chloride	All resin types	1.4 ppmv.
	e. Dioxins/furans (toxic equivalency basis).	All resin types	0.034 nanograms per dry standard cubic meter (ng/dscm).
3. Stripped resin	a. Vinyl chloride	i. Bulk resin	7.1 parts per million by weight (ppmw).
		ii. Dispersion resin	480 ppmw.
		iii. Suspension resin	7.3 ppmw.
		iv. Suspension blending resin	140 ppmw.
		v. Copolymer—all resin types	790 ppmw.
	b. Total non-vinyl chloride organic HAP.	i. Bulk resin	170 ppmw.
		ii. Dispersion resin	66 ppmw.
		iii. Suspension resin	15 ppmw.
		iv. Suspension blending resin	500 ppmw.
		v. Copolymer resin	1900 ppmw.
4. Process Wastewater	a. Vinyl chloride	All resin types	0.28 ppmw.
	b. Total non-vinyl chloride organic HAP.	All resin types	0.018 ppmw.

[a] Emission limits at 3 percent oxygen, dry basis.
[b] Total organic HAP is alternative compliance limit for THC.

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

If the storage vessel capacity (gallons) is . . .	And the vapor pressure[a] (psia) is . . .	Then, you must use the following type of storage vessel . . .
≥20,000 but <40,000	≥4	Internal floating roof, external floating roof, or fixed roof vented to a closed vent system and control device achieving 95 percent reduction.[b]
≥40,000	≥0.75	Internal floating roof, external floating roof, or fixed roof vented to a closed vent system and control device achieving 95 percent reduction.[b]
Any capacity.	>11.1	Pressure vessel.[c]
All other capacity and vapor pressure combinations		Fixed roof.[d]

[a] Maximum true vapor pressure of total HAP at storage temperature.
[b] If using a fixed roof storage vessel vented to a closed vent system and control device, you must meet the requirements in §63.11910(a) for fixed roof storage vessels. If using an internal floating roof storage vessel or external floating roof storage vessels, you must meet the requirements in §63.11910(b) for internal floating roof storage vessels or external floating roof storage vessels, as applicable.
[c] Meeting the requirements of §63.11910(c) for pressure vessels.
[d] Meeting the requirements in §63.11910(a) for fixed roof storage vessels.

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

Citation	Subject	Applies to subpart HHHHHHH	Comment
§63.1(a)(1)–(a)(4), (a)(6), (a)(10)–(a)(12), (b)(1), (b)(3), (c)(1), (c)(2), (c)(5), (e).	Applicability	Yes.	
§63.1(a)(5), (a)(7)–(a)(9), (b)(2), (c)(3), (c)(4), (d).	[Reserved]	No.	
§63.2	Definitions	Yes	Additional definitions are found in §63.12005.
§63.3	Units and abbreviations	Yes.	
§63.4(a)(1), (a)(2), (b), (c)	Prohibited activities and circumvention.	Yes.	
§63.4(a)(3)–(a)(5)	[Reserved]	No.	
§63.5(a), (b)(1), (b)(3), (b)(4), (b)(6), (d)–(f).	Preconstruction review and notification requirements.	Yes.	
§63.5(b)(2), (b)(5), (c)	[Reserved]	No.	
§63.6(a), (b)(1)–(b)(5), (b)(7), (c)(1), (c)(2), (c)(5), (e)(1)(iii), (f)(2), (f)(3), (g), (i), (j).	Compliance with standards and maintenance requirements.	Yes	§63.11875 specifies compliance dates.

Citation	Subject	Applies to subpart HHHHHHH	Comment
§63.6(b)(6), (c)(3), (c)(4), (d), (e)(2), (e)(3)(ii), (h)(2)(ii), (h)(3), (h)(5)(iv).	[Reserved]	No.	
§63.6(e)(1)(i), (e)(1)(ii), (e)(3), (f)(1).	Startup, shutdown, and malfunction provisions.	No. See §63.11890(b) for general duty requirement.	
§63.6(h)(1), (h)(2)(i), (h)(2)(iii), (h)(4), (h)(5)(i)–(h)(5)(iii), (h)(5)(v), (h)(6)–(h)(9).	Compliance with opacity and visible emission standards.	No	Subpart HHHHHHH does not specify opacity or visible emission standards.
§63.7(a)(1), (a)(2), (a)(3), (a)(4), (b)–(d), (e)(2)–(e)(4), (f), (g)(1), (g)(3), (h).	Performance testing requirements.	Yes.	
§63.7(a)(2)(i)–(viii)	[Reserved]	No.	
§63.7(a)(2)(ix)	Performance testing requirements.	Yes.	
§63.7(e)(1)	Performance testing	No. See especially §63.11945, 63.11960(d), 63.11980(a).	
§63.7(g)(2)	[Reserved]	No..	
§63.8(a)(1), (a)(2), (a)(4), (b), (c)(1)(i), (c)(1)(ii), (c)(2)–(c)(4), (c)(6)–(c)(8).	Monitoring requirements	Yes	Except cross reference in §63.8(c)(1)(i) to §63.6(e)(1) is replaced with a cross-reference to §63.11890(b).
§63.8(a)(3)	[Reserved]	No.	
§63.8(c)(1)(iii)	Requirement to develop SSM plan for continuous monitoring systems.	No.	
§63.8(c)(5)	Continuous opacity monitoring system minimum procedures.	No	Subpart HHHHHHH does not have opacity or visible emission standards.
§63.8(d)	Written procedures for continuous monitoring systems.	Yes, except for last sentence, which refers to an SSM plan. SSM plans are not required.	
§63.8(e)	Continuous monitoring systems performance evaluation.	Yes.	
§63.8(f)	Use of an alternative monitoring method.	Yes.	
§63.8(g)	Reduction of monitoring data	Yes	Except that the minimum data collection requirements are specified in §63.11935(e).
§63.9(a), (b)(1), (b)(2), (b)(4)(i), (b)(4)(v), (b)(5), (c)–(e), (g)(1), (g)(3), (h)(1)–(h)(3), (h)(5), (h)(6), (i), (j).	Notification requirements	Yes.	
§63.9(f)	Notification of opacity and visible emission observations.	No	Subpart HHHHHHH does not have opacity or visible emission standards.
§63.9(g)(2)	Use of continuous opacity monitoring system data.	No	Subpart HHHHHHH does not require the use of continuous opacity monitoring system.
§63.9(b)(3), (b)(4)(ii)–(iv), (h)(4).	[Reserved]	No.	
§63.10(a), (b)(1)	Recordkeeping and reporting requirements.	Yes.	
§63.10(b)(2)(i)	Recordkeeping of occurrence and duration of startups and shutdowns.	No.	
§63.10(b)(2)(ii)	Recordkeeping of malfunctions.	No. See §§63.11895(b), 63.11985(b)(4)(i), 63.11985(b)(9) through (11), and 63.11985(c)(7).	
§63.10(b)(2)(iii)	Maintenance records	Yes.	
§63.10(b)(2)(iv), (b)(2)(v)	Actions taken to minimize emissions during SSM.	No.	
§63.10(b)(2)(vi)	Recordkeeping for CMS malfunctions.	Yes.	
§63.10(b)(2)(vii)–(x)	Other CMS requirements	Yes.	
§63.10(b)(2)(xi)–(xiv)	Other recordkeeping requirements.	Yes.	
§63.10(b)(3)	Recordkeeping requirement for applicability determinations.	Yes.	

Citation	Subject	Applies to subpart HHHHHHH	Comment
§ 63.10(c)(1), (c)(5), (c)(6)	Additional recordkeeping requirements for sources with continuous monitoring systems.	Yes.	
§ 63.10(c)(2)–(4), (c)(9)	[Reserved]	No.	
§ 63.10(c)(7)	Additional recordkeeping requirements for CMS—identifying exceedances and excess emissions during SSM.	Yes.	
§ 63.10(c)(8)	Additional recordkeeping requirements for CMS—identifying exceedances and excess emissions.	Yes.	
§ 63.10(c)(10)	Recording nature and cause of malfunctions.	No. See §§ 63.11895(b), 63.11985(b)(4)(i), 63.11985(b)(9) through (11), and 63.11985(c)(7).	
63.10(c)(11), (c)(12)	Recording corrective actions	No. See §§ 63.11895(b), 63.11985(b)(4)(i), 63.11985(b)(9) through (11), and 63.11985(c)(7).	
§ 63.10(c)(13)–(14)	Records of the total process operating time during the reporting period and procedures that are part of the continuous monitoring system quality control program.	Yes.	
§ 63.10(c)(15)	Use SSM plan	No.	
§ 63.10(d)(1)	General reporting requirements.	Yes.	
§ 63.10(d)(2)	Performance test results	Yes.	
§ 63.10(d)(3)	Opacity or visible emissions observations.	No	Subpart HHHHHHH does not specify opacity or visible emission standards.
§ 63.10(d)(4)	Progress reports	Yes.	
§ 63.10(d)(5)	SSM reports	No. See §§ 63.11895(b), 63.11985(b)(4)(i), 63.11985(b)(9) through (11), and 63.11985(c)(7).	
§ 63.10(e)(1)	Additional continuous monitoring system reports—general.	Yes.	
§ 63.10(e)(2)(i)	Results of continuous monitoring system performance evaluations.	Yes.	
§ 63.10(e)(2)(ii)	Results of continuous opacity monitoring system performance evaluations.	No	Subpart HHHHHHH does not require the use of continuous opacity monitoring system.
§ 63.10(e)(3)	Excess emissions/continuous monitoring system performance reports.	Yes.	
§ 63.10(e)(4)	Continuous opacity monitoring system data reports.	No	Subpart HHHHHHH does not require the use of continuous opacity monitoring system.
§ 63.10(f)	Recordkeeping/reporting waiver.	Yes.	
63.11(a)	Control device and work practice requirements—applicability.	Yes.	
§ 63.11(b)	Flares	No	Facilities subject to subpart HHHHHHH do not use flares as control devices, as specified in § 63.11925(b).
§ 63.11(c)–(e)	Alternative work practice for monitoring equipment for leaks.	Yes.	
§ 63.12	State authority and delegations.	Yes	§ 63.12000 identifies types of approval authority that are not delegated.
§ 63.13	Addresses	Yes.	

Citation	Subject	Applies to subpart HHHHHHH	Comment
§ 63.14	Incorporations by reference	Yes	Subpart HHHHHHH incorporates material by reference.
§ 63.15	Availability of information and confidentiality.	Yes.	
§ 63.16	Performance track provisions	Yes.	

TABLE 5 TO SUBPART HHHHHHH 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
Process Vents				
Any Control device				
Flow to/from the control device.	N/A	Continuous	N/A	Date and time of flow start and stop.
Thermal Oxidizers				
Temperature (in fire box or downstream ductwork prior to heat exchange).	Minimum temperature	Continuous	Every 15 minutes	3-hour block average.
Temperature differential across catalyst bed.	Minimum temperature differential.	Continuous	Every 15 minutes	3-hour block average.
Inlet temperature to catalyst bed and catalyst condition.	Minimum inlet temperature and catalyst condition as specified in 63.11940 (b)(3).	Continuous for temperature, annual for catalyst condition.	Every 15 minutes for temperature, annual for catalyst condition.	3-hour block average for temperature, annual for catalyst condition.
Absorbers and Acid Gas Scrubbers				
Influent liquid flow	Minimum inlet liquid flow.	Continuous	Every 15 minutes	3-hour block average.
Influent liquid flow and gas stream flow.	Minimum influent liquid flow to gas stream flow ratio.	Continuous	Every 15 minutes	3-hour block average.
Pressure drop	Minimum pressure drop	Continuous	Every 15 minutes	3-hour block average.
Exhaust gas temperature.	Maximum exhaust gas temperature.	Continuous	Every 15 minutes	3-hour block average.
Change in specific gravity of scrubber liquid.	Minimum change in specific gravity.	Continuous	Every 15 minutes	3-hour block average.
pH of effluent liquid	Minimum pH	Continuous	Every 15 minutes	3-hour block average.
Causticity of effluent liquid.	Minimum causticity	Continuous	Every 15 minutes	3-hour block average.
Conductivity of effluent liquid.	Minimum conductivity	Continuous	Every 15 minutes	3-hour block average.
Regenerative Adsorber				
Regeneration stream flow.	Minimum total flow per regeneration cycle.	Continuous	N/A	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.	N/A	Average of regeneration cycle.

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
Vacuum and duratio of regeneration.	Minimum vacuum and period of time for regeneration.	Continuous	N/A	Average vacuum and duration of regeneration.
Regeneration frequency	Minimum regeneration frequency and duration.	Continuous	N/A	Date and time of regeneration start and stop.
Adsorber operation valve sequencing and cycle time.	Correct valve sequencing and minimum cycle time.	Daily	Daily	N/A.
Non-Regenerative Adsorber				
Average adsorber bed life.	N/A	Daily until breakthrough for 3 adsorber bed change-outs.	N/A	N/A.
Outlet VOC concentration of the first adsorber bed in series.	Limits in Table 1 or 2 of this subpart.	Daily, except monthly (if more than 2 months bed life remaining) or weekly (if more than 2 weeks bed life remaining).	N/A	Daily, weekly, or monthly.
Condenser				
Temperature	Maximum outlet temperature.	Continuous	Every 15 minutes	3-hour block average.

TABLE 6 TO SUBPART HHHHHHH OF PART 63—TOXIC EQUIVALENCY FACTORS

Dioxin/furan congener	Toxic equivalency factor
2,3,7,8-tetrachlorodibenzo-p-dioxin	1
1,2,3,7,8-pentachlorodibenzo-p-dioxin	1
1,2,3,4,7,8-hexachlorodibenzo-p-dioxin	0.1
1,2,3,7,8,9-hexachlorodibenzo-p-dioxin	0.1
1,2,3,6,7,8-hexachlorodibenzo-p-dioxin	0.1
1,2,3,4,6,7,8-heptachlorodibenzo-p-dioxin	0.01
octachlorodibenzo-p-dioxin	0.0003
2,3,7,8-tetrachlorodibenzofuran	0.1
2,3,4,7,8-pentachlorodibenzofuran	0.3
1,2,3,7,8-pentachlorodibenzofuran	0.03
1,2,3,4,7,8-hexachlorodibenzofuran	0.1
1,2,3,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,7,8,9-hexachlorodibenzofuran	0.1
2,3,4,6,7,8-hexachlorodibenzofuran	0.1
1,2,3,4,6,7,8-heptachlorodibenzofuran	0.01
1,2,3,4,7,8,9-heptachlorodibenzofuran	0.01
Octachlorodibenzofuran	0.0003

TABLE 7 TO SUBPART HHHHHHH OF PART 63—CALIBRATION AND ACCURACY REQUIREMENTS FOR CONTINUOUS PARAMETER MONITORING SYSTEMS

If you monitor this parameter . . .	Then your accuracy requirements are . . .	And your inspection/calibration frequency requirements are . . .
1. Temperature (non-cryogenic temperature ranges).	±1 percent of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit) whichever is greater.	Every 12 months.
2. Temperature (cryogenic temperature ranges).	±2.5 percent of temperature measured or 2.8 degrees Celsius (5 degrees Fahrenheit) whichever is greater.	Every 12 months.

If you monitor this parameter . . .	Then your accuracy requirements are . . .	And your inspection/calibration frequency requirements are . . .
3. Liquid flow rate	±2 percent of the normal range of flow	a. Every 12 months. b. You must select a measurement location where swirling flow or abnormal velocity distributions due to upstream and downstream disturbances at the point of measurement do not exist.
4. Gas flow rate	±5 percent of the flow rate or 10 cubic feet per minute, whichever is greater.	a. Every 12 months. b. Check all mechanical connections for leakage at least annually. c. At least annually, conduct a visual inspection of all components of the flow CPMS for physical and operational integrity and all electrical connections for oxidation and galvanic corrosion if your flow CPMS is not equipped with a redundant flow sensor.
5. pH or caustic strength	±0.2 pH units	Every 8 hours of process operation check the pH or caustic strength meter's calibration on at least two points.
6. Conductivity	±5 percent of normal range	Every 12 months.
7. Mass flow rate	±5 percent of normal range	Every 12 months.
8. Pressure	±5 percent or 0.12 kilopascals (0.5 inches of water column) whichever is greater.	a. Calibration is required every 12 months. b. Check all mechanical connections for leakage at least annually. c. At least annually perform a visual inspection of all components for integrity, oxidation and galvanic corrosion if CPMS is not equipped with a redundant pressure sensor.

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

For each control device used to meet the emission limit in Table 1 or 2 to this subpart for the following pollutant . . .	You must . . .	Using . . .
1. Total hydrocarbons.	a. Measure the total hydrocarbon concentration at the outlet of the final control device or in the stack.	Method 25A at 40 CFR part 60, appendix A–7. Conduct each test run for a minimum of 1 hour.
2. Total organic HAP.	a. Measure the total organic HAP concentration at the outlet of the final control device or in the stack.	i. Method 18 at 40 CFR part 60, appendix A–6 and ASTM D6420–99.[a] Conduct each test run for a minimum of 1 hour. ii. Method 320 at 40 CFR part 63, appendix A and ASTM D6348–03.[a] Conduct each test run for a minimum of 1 hour.
3. Vinyl chloride	a. Measure the vinyl chloride concentration at the outlet of the final control device or in the stack.	Method 18 at 40 CFR part 60, appendix A–6. Conduct each test run for a minimum of 1 hour.
4. Hydrogen chloride.	a. Measure hydrogen chloride concentrations at the outlet of the final control device or in the stack.	i. Method 26 at 40 CFR part 60, appendix A–8, collect 60 dry standard liters of gas per test run; or ii. Method 26A at 40 CFR part 60, appendix A–8, collect 1 dry standard cubic meter of gas per test run.

For each control device used to meet the emission limit in Table 1 or 2 to this subpart for the following pollutant . . .	You must . . .	Using . . .
5. Dioxin/furan	a. Measure dioxin/furan concentrations on a toxic equivalency basis (and report total mass per isomer) at the outlet of the final control device or in the stack.	Method 23 at 40 CFR part 60, appendix A–7 and collect 5 dry standard cubic meters of gas per test run.
6. Any pollutant from a continuous, batch, or combination of continuous and batch process vent(s).	a. Select sampling port locations and the number of traverse points.	Method 1 or 1A at 40 CFR part 60, appendix A–1.
	b. Determine gas velocity and volumetric flow rate.	Method 2, 2A, 2C, 2D, 2F, or 2G at 40 CFR part 60, appendix A–1 and A–2.
	c. Conduct gas molecular weight analysis and correct concentrations the specified percent oxygen in Table 1 or 2 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.
	d. Measure gas moisture content.	Method 4 at 40 CFR part 60, appendix A–3.

[a] Incorporated by reference, see § 63.14.

TABLE 9 TO SUBPART HHHHHHH 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 . . .
Each stripped resin stream			
1. Initial compliance	a. Continuous	Every 8 hours or for each grade, whichever is more frequent during a 24 hour period.	Every 8 hours or for each grade, whichever is more frequent during a 24 hour period.
	b. Batch	1 grab sample for each batch produced during a 24 hour period.	1 grab sample for each batch produced during a 24 hour period.
2. Continuous compliance	a. Continuous	On a daily basis, 1 grab sample every 8 hours or for each grade, whichever is more frequent during a 24 hour period.	On a monthly basis, 1 grab sample every 8 hours or for each grade, whichever is more frequent during a 24 hour period.
	b. Batch	On a daily basis, 1 grab sample for each batch produced during a 24 hour period.	On a monthly basis, 1 grab sample for each batch produced during a 24 hour period.
Each process wastewater stream			
3. Initial compliance	N/A	1 grab sample	1 grab sample.
4. Continuous compliance	N/A	1 grab sample per month	1 grab sample per month.

TABLE 10 TO SUBPART HHHHHHH OF PART 63—HAP SUBJECT TO THE RESIN AND PROCESS WASTEWATER PROVISIONS AT NEW AND EXISTING SOURCES

CAS No.	HAP	Analyte category	Test method
107211	Ethylene glycol	Alcohol	SW–846–8015C.[a]
67561	Methanol	Alcohol	SW–846–8015C.[a]
75070	Acetaldehyde	Aldehyde	SW–846–8315A.[a]
50000	Formaldehyde	Aldehyde	SW–846–8315A.[a]
51285	2,4-dinitrophenol	SVOC	SW–846–8270D.[a]
98862	Acetophenone	SVOC	SW–846–8270D.[a]
117817	Bis(2-ethylhexyl) phthalate (DEHP).	SVOC	SW–846–8270D.[a]

CAS No.	HAP	Analyte category	Test method
123319	Hydroquinone	SVOC	SW–846–8270D.[a]
108952	Phenol	SVOC	SW–846–8270D.[a]
79345	1,1,2,2-tetrachloroethane	VOC	SW–846–8260B.[a]
106990	1,3-butadiene	VOC	SW–846–8260B.[a]
540841	2,2,4-trimethylpentane	VOC	SW–846–8260B.[a]
71432	Benzene	VOC	SW–846–8260B.[a]
108907	Chlorobenzene	VOC	SW–846–8260B.[a]
67663	Chloroform	VOC	SW–846–8260B.[a]
126998	Chloroprene	VOC	SW–846–8260B.[a]
98828	Cumene	VOC	SW–846–8260B.[a]
75003	Ethyl chloride (Chloroethane)	VOC	SW–846–8260B.[a]
100414	Ethylbenzene	VOC	SW–846–8260B.[a]
107062	Ethylene dichloride (1,2-Dichloroethane).	VOC	SW–846–8260B.[a]
75343	Ethylidene dichloride (1,1-Dichloroethane).	VOC	SW–846–8260B.[a]
74873	Methyl chloride (Chloromethane).	VOC	SW–846–8260B.[a]
75092	Methylene chloride	VOC	SW–846–8260B.[a]
110543	n-Hexane	VOC	SW–846–8260B.[a]
108883	Toluene	VOC	SW–846–8260B.[a]
71556/79005	Trichloroethane	VOC	SW–846–8260B.[a]
108054	Vinyl acetate	VOC	SW–846–8260B.[a]
593602	Vinyl bromide	VOC	SW–846–8260B.[a]
75014	Vinyl chloride	VOC	Method 107 at 40 CFR part 61, appendix B.
75354	Vinylidene chloride (1,1-Dichloroethylene).	VOC	SW–846–8260B.[a]
1330207	Xylenes (isomers and mixtures)	VOC	SW–846–8260B.[a]

[a] Incorporated by reference, see § 63.14.

APPENDIX A TO PART 63—TEST METHODS POLLUTANT MEASUREMENT METHODS FROM VARIOUS WASTE MEDIA

METHOD 301—FIELD VALIDATION OF

Sec.