

**Subpart FFFF—National Emission Standards for Hazardous Air Pollutants: Miscellaneous**

**Organic Chemical Manufacturing**

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#### **What This Subpart Covers**

##### **§ 63.2430 What is the purpose of this subpart?**

This subpart establishes national emission standards for hazardous air pollutants (NESHAP) for miscellaneous organic chemical manufacturing. This subpart also establishes requirements to demonstrate initial and continuous compliance with the emission limits, operating limits, and work practice standards.

**§ 63.2435 Am I subject to the requirements in this subpart?**

(a) You are subject to the requirements in this subpart if you own or operate miscellaneous organic chemical manufacturing process units (MCPU) that are located at, or are part of, a major source of hazardous air pollutants (HAP) emissions as defined in section 112(a) of the Clean Air Act (CAA).

(b) An MCPU includes equipment necessary to operate a miscellaneous organic chemical manufacturing process, as defined in § 63.2550, that satisfies all of the conditions specified in paragraphs (b)(1) through (3) of this section. An MCPU also includes any assigned storage tanks and transfer racks; equipment in open systems that is used to convey or store water having the same concentration and flow characteristics as wastewater; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems that are used to manufacture any material or family of materials described in paragraphs (b)(1)(i) through (v) of this section.

(1) The MCPU produces material or family of materials that is described in paragraph (b)(1)(i), (ii), (iii), (iv), or (v) of this section.

(i) An organic chemical(s) classified using the 1987 version of SIC code 282, 283, 284, 285, 286, 287, 289, or 386, except as provided in paragraph (c)(5) of this section.

(ii) An organic chemical(s) classified using the 1997 version of NAICS code 325, except as provided in paragraph (c)(5) of this section.

(iii) Quaternary ammonium compounds and ammonium sulfate produced with caprolactam.

(iv) Hydrazine.

(v) Organic solvents classified in any of the SIC or NAICS codes listed in paragraph (b)(1)(i) or (ii) of this section that are recovered using nondedicated solvent recovery operations.

(2) The MCPU processes, uses, or generates any of the organic HAP listed in section 112(b) of the CAA or hydrogen halide and halogen HAP, as defined in § 63.2550.

(3) The MCPU is not an affected source or part of an affected source under another subpart of this part 63, except for process vents from batch operations within a chemical manufacturing process unit (CMPU), as identified in § 63.100(j)(4). For this situation, the MCPU is the same as the CMPU as defined in § 63.100, and you are subject only to the requirements for batch process vents in this subpart.

(c) The requirements in this subpart do not apply to the operations specified in paragraphs (c)(1) through (7) of this section.

(1) Research and development facilities, as defined in section 112(c)(7) of the CAA.

(2) The manufacture of ammonium sulfate as a by-product, if the slurry entering the by-product manufacturing process contains 50 parts per million by weight (ppmw) HAP or less or 10 ppmw benzene or less. You must retain information, data, and analysis to document the HAP concentration in the entering slurry in order to claim this exemption.

(3) The affiliated operations located at an affected source under subparts GG (National Emission Standards for Aerospace Manufacturing and Rework Facilities), KK (National Emission Standards for the Printing and Publishing Industry), JJJJ (NESHAP: Paper and Other Web Coating), MMMM (NESHAP: Surface Coating of Miscellaneous Metal Parts and Products), and SSSS (NESHAP: Surface Coating of Metal Coil) of this part. Affiliated operations include, but are not limited to, mixing or dissolving of coating ingredients; coating mixing for viscosity adjustment, color tint or additive blending, or pH adjustment; cleaning of

coating lines and coating line parts; handling and storage of coatings and solvent; and conveyance and treatment of wastewater.

(4) Fabricating operations (such as spinning or compressing a solid polymer into its end use); compounding operations (in which blending, melting, and resolidification of a solid polymer product occur for the purpose of incorporating additives, colorants, or stabilizers); and extrusion and drawing operations (converting an already produced solid polymer into a different shape by melting or mixing the polymer and then forcing it or pulling it through an orifice to create an extruded product). An operation is not exempt if it involves processing with HAP solvent or if an intended purpose of the operation is to remove residual HAP monomer.

(5) Production activities described using the 1997 version of NAICS codes 325131, 325181, 325188 (except the requirements do apply to hydrazine), 325314, 325991 (except the requirements do apply to reformulating plastics resins from recycled plastics products), and 325992 (except the requirements do apply to photographic chemicals).

(6) Tall oil recovery systems.

(7) Carbon monoxide production.

(d) If the predominant use of a transfer rack loading arm or storage tank (including storage tanks in series) is associated with a miscellaneous organic chemical manufacturing process, and the loading arm or storage tank is not part of an affected source under a subpart of this part 63, then you must assign the loading arm or storage tank to the MCPU for that miscellaneous organic chemical manufacturing process. If the predominant use cannot be determined, then you may assign the loading arm or storage tank to any MCPU that shares it and is subject to this subpart. If the use varies from year to year, then you must base the determination on the utilization that occurred during the year preceding November 10, 2003 or, if

the loading arm or storage tank was not in operation during that year, you must base the use on the expected use for the first 5-year period after startup. You must include the determination in the notification of compliance status report specified in § 63.2520(d). You must redetermine the primary use at least once every 5 years, or any time you implement emissions averaging or pollution prevention after the compliance date.

(e) For nondedicated equipment used to create at least one MCPU, you may elect to develop process unit groups (PUG), determine the primary product of each PUG, and comply with the requirements of the subpart in 40 CFR part 63 that applies to that primary product as specified in § 63.2535(l).

**§ 63.2440 What parts of my plant does this subpart cover?**

(a) This subpart applies to each miscellaneous organic chemical manufacturing affected source.

(b) The miscellaneous organic chemical manufacturing affected source is the facility-wide collection of MCPU and heat exchange systems, wastewater, and waste management units that are associated with manufacturing materials described in § 63.2435(b)(1).

(c) A new affected source is described by either paragraph (c)(1) or (2) of this section.

(1) Each affected source defined in paragraph (b) of this section for which you commenced construction or reconstruction after April 4, 2002, and you meet the applicability criteria at the time you commenced construction or reconstruction.

(2) Each dedicated MCPU that has the potential to emit 10 tons per year (tpy) of any one HAP or 25 tpy of combined HAP, and you commenced construction or reconstruction of the MCPU after April 4, 2002. For the purposes of this paragraph, an MCPU is an affected source in the definition of the term “reconstruction” in § 63.2.

(d) An MCPU that is also a CMPU under § 63.100 is reconstructed for the purposes of this subpart if, and only if, the CMPU meets the requirements for reconstruction in § 63.100(1)(2).

#### **Compliance Dates**

##### **§ 63.2445 When do I have to comply with this subpart?**

(a) Except as specified in paragraphs (g) through (i) of this section, if you have a new affected source, you must comply with this subpart according to the requirements in paragraphs (a)(1) and (2) of this section.

(1) If you startup your new affected source before November 10, 2003, then you must comply with the requirements for new sources in this subpart no later than November 10, 2003.

(2) If you startup your new affected source after November 10, 2003, then you must comply with the requirements for new sources in this subpart upon startup of your affected source.

(b) Except as specified in paragraphs (g) through (i) of this section, if you have an existing source on November 10, 2003, you must comply with the requirements for existing sources in this subpart no later than May 10, 2008.

(c) You must meet the notification requirements in § 63.2515 according to the dates specified in that section and in subpart A of this part 63. Some of the notifications must be submitted before you are required to comply with the emission limits, operating limits, and work practice standards in this subpart.

(d) If you have a Group 2 emission point that becomes a Group 1 emission point after the compliance date for your affected source, you must comply with the Group 1 requirements

beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(e) If, after the compliance date for your affected source, hydrogen halide and halogen HAP emissions from process vents in a process increase to more than 1,000 lb/yr, or HAP metals emissions from a process at a new affected source increase to more than 150 lb/yr, you must comply with the applicable emission limits specified in Table 3 to this subpart and the associated compliance requirements beginning on the date the emissions exceed the applicable threshold. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(f) If you have a small control device for process vent or transfer rack emissions that becomes a large control device, as defined in § 63.2550(i), you must comply with monitoring and associated recordkeeping and reporting requirements for large control devices beginning on the date the switch occurs. An initial compliance demonstration as specified in this subpart must be conducted within 150 days after the switch occurs.

(g) All affected sources that commenced construction or reconstruction on or before December 17, 2019, must be in compliance with the requirements listed in paragraphs (g)(1) through (7) of this section upon initial startup or on August 12, 2023, whichever is later. All affected sources that commenced construction or reconstruction after December 17, 2019, must be in compliance with the requirements listed in paragraphs (g)(1) through (7) of this section upon initial startup, or on August 12, 2020 whichever is later.

(1) The general requirements specified in §§ 63.2450(a)(2), (e)(4) through (7), (g)(6) and (7), (i)(3), (j)(5)(ii), (j)(6), (k)(1)(ii), (k)(7) and (8), (t), and (u), 63.2520(d)(3) and (e)(11) through (13), 63.2525(m) through (o), and 63.2535(m).

(2) For process vents, the requirements specified in §§ 63.2450(v), 63.2520(e)(14), and 63.2525(p).

(3) For storage tank degassing, the requirements specified in § 63.2470(f).

(4) For equipment leaks and pressure relief devices, the requirements specified in §§ 63.2480(e) and (f), 63.2520(d)(4) and (e)(14), and 63.2525(q).

(5) For wastewater streams and liquid streams in open systems within an MCPU, the requirements specified in § 63.2485(i)(2)(iii), (n)(2)(vii), (p), and (q).

(6) For heat exchange systems, the requirements specified in §§ 63.2490(d), 63.2520(e)(16), and 63.2525(r).

(7) The other notification, reports, and records requirements specified in §§ 63.2500(g), 63.2520(e)(5)(ii)(D) and (e)(5)(iii)(M) and (N), and 63.2525(l) and (u).

(h) All affected sources that commenced construction or reconstruction on or before December 17, 2019, must be in compliance with the requirements for pumps in light liquid service in § 63.2480(b)(6) and (c)(10) upon initial startup or on August 12, 2021, whichever is later. All affected sources that commenced construction or reconstruction after December 17, 2019, must be in compliance with the requirements for pumps in light liquid service in § 63.2480(b)(6) and (c)(10) upon initial startup, or on August 12, 2020, whichever is later.

(i) All affected sources that commenced construction or reconstruction on or before December 17, 2019, must be in compliance with the ethylene oxide requirements in §§ 63.2450(h) and (r), 63.2470(b) and (c)(4), 63.2492, 63.2493, 63.2520(d)(5) and (e)(17), and 63.2525(s) and Table 1 to this subpart, item 5, Table 2 to this subpart, item 3, Table 4 to this subpart, item 3, and Table 6 to this subpart, item 3, upon initial startup or on August 12, 2022, whichever is later. All affected sources that commenced construction or reconstruction after

December 17, 2019, must be in compliance with the ethylene oxide requirements listed in §§ 63.2450(h) and (r), 63.2470(b) and (c)(4), 63.2492, 63.2493, 63.2520(d)(5) and (e)(17), and 63.2525(s) and Table 1 to this subpart, item 5, Table 2 to this subpart, item 3, Table 4 to this subpart, item 3, and Table 6 to this subpart, item 3, upon initial startup, or on August 12, 2020, whichever is later.

**Emission Limits, Work Practice Standards, and Compliance Requirements**

**§ 63.2450 What are my general requirements for complying with this subpart?**

(a) **General.** You must comply with paragraphs (a)(1) and (2) of this section.

(1) Except as specified in paragraph (a)(2) of this section, you must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to this subpart at all times, except during periods of startup, shutdown, and malfunction (SSM), and you must meet the requirements specified in §§ 63.2455 through 63.2490 (or the alternative means of compliance in § 63.2495, § 63.2500, or § 63.2505), except as specified in paragraphs (b) through (s) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§ 63.2515, 63.2520, and 63.2525.

(2) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (a)(1) of this section no longer applies. Instead, you must be in compliance with the emission limits and work practice standards in Tables 1 through 7 to this subpart at all times, and you must meet the requirements specified in §§ 63.2455 through 63.2490 (or the alternative means of compliance in § 63.2495, § 63.2500, or § 63.2505), except as specified in paragraphs (b) through (v) of this section. You must meet the notification, reporting, and recordkeeping requirements specified in §§ 63.2515, 63.2520, and 63.2525.

(b) ***Determine halogenated vent streams.*** You must determine if an emission stream is a halogenated vent stream, as defined in § 63.2550, by calculating the mass emission rate of halogen atoms in accordance with § 63.115(d)(2)(v). Alternatively, you may elect to designate the emission stream as halogenated.

(c) ***Requirements for combined emission streams.*** When organic HAP emissions from different emission types (*e.g.*, continuous process vents, batch process vents, storage tanks, transfer operations, and waste management units) are combined, you must comply with the requirements of either paragraph (c)(1) or (2) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of organic HAP emissions in the stream (*e.g.*, the requirements of table 1 to this subpart for continuous process vents and the requirements of table 4 to this subpart for emissions from storage tanks).

(2) Determine the applicable requirements based on the hierarchy presented in paragraphs (c)(2)(i) through (vi) of this section. For a combined stream, the applicable requirements are specified in the highest-listed paragraph in the hierarchy that applies to any of the individual streams that make up the combined stream. For example, if a combined stream consists of emissions from Group 1 batch process vents and any other type of emission stream, then you must comply with the requirements in paragraph (c)(2)(i) of this section for the combined stream; compliance with the requirements in paragraph (c)(2)(i) of this section constitutes compliance for the other emission streams in the combined stream. Two exceptions are that you must comply with the requirements in Table 3 to this subpart and § 63.2465 for all process vents with hydrogen halide and halogen HAP emissions, and recordkeeping requirements for Group 2 applicability or compliance are still required (*e.g.*, the requirement in § 63.2525(e)(3) and (4) to

track the number of batches produced and calculate rolling annual emissions for processes with Group 2 batch process vents).

(i) The requirements of table 2 to this subpart and § 63.2460 for Group 1 batch process vents, including applicable monitoring, recordkeeping, and reporting.

(ii) The requirements of table 1 to this subpart and § 63.2455 for continuous process vents that are routed to a control device, as defined in § 63.981, including applicable monitoring, recordkeeping, and reporting.

(iii) The requirements of table 5 to this subpart and § 63.2475 for transfer operations, including applicable monitoring, recordkeeping, and reporting.

(iv) The requirements of table 7 to this subpart and § 63.2485 for emissions from waste management units that are used to manage and treat Group 1 wastewater streams and residuals from Group 1 wastewater streams, including applicable monitoring, recordkeeping, and reporting.

(v) The requirements of table 4 to this subpart and § 63.2470 for control of emissions from storage tanks, including applicable monitoring, recordkeeping, and reporting.

(vi) The requirements of table 1 to this subpart and § 63.2455 for continuous process vents after a recovery device including applicable monitoring, recordkeeping, and reporting.

(d) [Reserved]

(e) ***Requirements for control devices.***

(1) Except when complying with § 63.2485 or paragraph (e)(7) of this section, if you reduce organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices (except a flare) or recovery devices, you must meet the

requirements of paragraph (e)(4) of this section, and the requirements of § 63.982(c) and the requirements referenced therein.

(2) Except as specified in paragraph (e)(5) of this section or except when complying with § 63.2485, if you reduce organic HAP emissions by venting emissions through a closed-vent system to a flare, you must meet the requirements of paragraph (e)(4) of this section, and the requirements of § 63.982(b) and the requirements referenced therein.

(3) Except as specified in paragraphs (e)(3)(i) and (ii) of this section, if you use a halogen reduction device to reduce hydrogen halide and halogen HAP emissions from halogenated vent streams, you must meet the requirements of paragraph (e)(4) of this section, and the requirements of § 63.994 and the requirements referenced therein. If you use a halogen reduction device before a combustion device, you must determine the halogen atom emission rate prior to the combustion device according to the procedures in § 63.115(d)(2)(v).

(i) Beginning on and after October 13, 2020, performance test reports must be submitted according to the procedures in § 63.2520(f).

(ii) If you use a halogen reduction device other than a scrubber, then you must submit procedures for establishing monitoring parameters to the Administrator as part of your precompliance report as specified in § 63.2520(c)(8).

(4) Beginning no later than the compliance dates specified in § 63.2445(g), the referenced provisions specified in paragraphs (e)(4)(i) through (xvi) of this section do not apply when demonstrating compliance with subpart SS of this part.

(i) The phrase “Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines” in § 63.983(a)(3) of subpart SS.

(ii) The second sentence of § 63.983(a)(5) of subpart SS.

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

(iv) The phrase “except during periods of start-up, shutdown, and malfunction as specified in the referencing subpart” in § 63.985(a) of subpart SS.

(v) The phrase “other than start-ups, shutdowns, or malfunctions” in § 63.994(c)(1)(ii)(D) of subpart SS.

(vi) Section 63.996(c)(2)(ii) of subpart SS.

(vii) The last sentence of § 63.997(e)(1)(i) of subpart SS.

(viii) Section 63.998(b)(2)(iii) of subpart SS.

(ix) The phrase “other than start-ups, shutdowns or malfunctions” in § 63.998(b)(5)(i)(A) of subpart SS.

(x) The phrase “other than a start-up, shutdown, or malfunction” from § 63.998(b)(5)(i)(B)(3) of subpart SS.

(xi) The phrase “other than start-ups, shutdowns or malfunctions” in § 63.998(b)(5)(i)(C) of subpart SS.

(xii) The phrase “other than a start-up, shutdown, or malfunction” from § 63.998(b)(5)(ii)(C) of subpart SS.

(xiii) The phrase “except as provided in paragraphs (b)(6)(i)(A) and (B) of this section” in § 63.998(b)(6)(i) of subpart SS.

(xiv) The second sentence of § 63.998(b)(6)(ii) of subpart SS.

(xv) Section 63.998(c)(1)(ii)(D), (E), (F), and (G) of subpart SS.

(xvi) Section 63.998(d)(3) of subpart SS.

(5) For any flare that is used to reduce organic HAP emissions from an MCPU, you may elect to comply with the requirements in this paragraph in lieu of the requirements of § 63.982(b) and the requirements referenced therein. However, beginning no later than the compliance dates specified in § 63.2445(g), paragraphs (e)(2) and (f) of this section no longer apply to flares that control ethylene oxide emissions from affected sources in ethylene oxide service as defined in § 63.2550 and flares used to control emissions from MCPUs that produce olefins or polyolefins. Instead, if you reduce organic HAP emissions by venting emissions through a closed-vent system to a steam-assisted, air-assisted, non-assisted, or pressure-assisted multi-point flare that controls ethylene oxide emissions from affected sources in ethylene oxide service as defined in § 63.2550 or is used to control emissions from an MCPU that produces olefins or polyolefins, then you must meet the applicable requirements for flares as specified in §§ 63.670 and 63.671 of subpart CC, including the provisions in Tables 12 and 13 to subpart CC of this part, except as specified in paragraphs (e)(5)(i) through (xiii) of this section. This requirement in this paragraph (e)(5) also applies to any flare using fuel gas from a fuel gas system, of which 50 percent or more of the fuel gas is derived from an MCPU that has processes and/or equipment in ethylene oxide service or that produces olefins or polyolefins, as determined on an annual average basis. For purposes of compliance with this paragraph (e)(5), the following terms are defined in § 63.641 of subpart CC: Assist air, assist steam, center steam, combustion zone, combustion zone gas, flare, flare purge gas, flare supplemental gas, flare sweep gas, flare vent gas, lower steam, net heating value, perimeter assist air, pilot gas, premix assist air, total steam, and upper steam. Also, for purposes of compliance with this paragraph (e)(5), “MCPUs that produces olefins or polyolefins” includes only those MCPUs that manufacture ethylene, propylene, polyethylene,

and/or polypropylene as a product. By-products and impurities as defined in § 63.101, as well as wastes and trace contaminants, are not considered products.

(i) When determining compliance with the pilot flame requirements specified in § 63.670(b) and (g), substitute “pilot flame or flare flame” for each occurrence of “pilot flame.”

(ii) When determining compliance with the flare tip velocity and combustion zone operating limits specified in § 63.670(d) and (e), the requirement effectively applies starting with the 15-minute block that includes a full 15 minutes of the flaring event. You are required to demonstrate compliance with the velocity and NHVcz requirements starting with the block that contains the fifteenth minute of a flaring event. You are not required to demonstrate compliance for the previous 15-minute block in which the event started and contained only a fraction of flow.

(iii) Instead of complying with paragraph (o)(2)(i) of § 63.670 of subpart CC, you must develop and implement the flare management plan no later than the compliance dates specified in § 63.2445(g).

(iv) Instead of complying with paragraph (o)(2)(iii) of § 63.670 of subpart CC, if required to develop a flare management plan and submit it to the Administrator, then you must also submit all versions of the plan in portable document format (PDF) to the EPA ~~via the Compliance and Emissions Data Reporting Interface (CEDRI) following the procedure specified in § 63.9(k), except any medium submitted through mail must be sent to the attention of the Miscellaneous Organic Chemical Manufacturing Sector Lead, which can be accessed through the EPA's Central Data Exchange (CDX) (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as confidential business information (CBI).~~

Anything submitted using CEDRI cannot later be claimed to be CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, submit a version with the CBI omitted via CEDRI. A complete plan, including information claimed to be CBI and clearly marked as CBI, must be mailed to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, CORE CBI Office, U.S. EPA Mailroom (C404-02), Attention: Miscellaneous Organic Chemical Manufacturing Sector Lead, 4930 Old Page Rd., Durham, NC 27703. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(e) emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

(v) Section 63.670(o)(3)(ii) of subpart CC and all references to § 63.670(o)(3)(ii) of subpart CC do not apply. Instead, the owner or operator must comply with the maximum flare tip velocity operating limit at all times.

(vi) Substitute “MCPU” for each occurrence of “petroleum refinery.”

(vii) Each occurrence of “refinery” does not apply.

(viii) If a pressure-assisted multi-point flare is used as a control device, then you must meet the following conditions:

(A) You are not required to comply with the flare tip velocity requirements in paragraph (d) and (k) of § 63.670 of subpart CC;

(B) You must ~~substitute “800” for each occurrence of “270” in~~ comply with the NHVcz requirements in paragraph (e)(2) of § 63.670 of subpart CC;

(C) You must determine the 15-minute block average NHV<sub>g</sub> using only the direct calculation method specified in paragraph (l)(5)(ii) of § 63.670 of subpart CC;

(D) Instead of complying with paragraph (b) and (g) of § 63.670 of subpart CC, if a pressure-assisted multi-point flare uses cross-lighting on a stage of burners rather than having an individual pilot flame on each burner, then you must operate each stage of the pressure-assisted multi-point flare with a flame present at all times when regulated material is routed to that stage of burners. Each stage of burners that cross-lights in the pressure-assisted multi-point flare must have at least two pilots with at least one continuously lit and capable of igniting all regulated material that is routed to that stage of burners. Each 15-minute block during which there is at least one minute where no pilot flame is present on a stage of burners when regulated material is routed to the flare is a deviation of the standard. Deviations in different 15-minute blocks from the same event are considered separate deviations. The pilot flame(s) on each stage of burners that use cross-lighting must be continuously monitored by a thermocouple or any other equivalent device used to detect the presence of a flame;

(E) Unless you choose to conduct a cross-light performance demonstration as specified in this paragraph (e)(5)(viii)(E), you must ensure that if a stage of burners on the flare uses cross-lighting, that the distance between any two burners in series on that stage is no more than 6 feet when measured from the center of one burner to the next burner. A distance greater than 6 feet between any two burners in series may be used provided you conduct a performance demonstration that confirms the pressure-assisted multi-point flare will cross-light a minimum of three burners and the spacing between the burners and location of the pilot flame must be representative of the projected installation. The compliance demonstration must be approved by the permitting authority and a copy of this approval must be maintained onsite. The compliance

demonstration report must include: A protocol describing the test methodology used, associated test method QA/QC parameters, the waste gas composition and NHVcz of the gas tested, the velocity of the waste gas tested, the pressure-assisted multi-point flare burner tip pressure, the time, length, and duration of the test, records of whether a successful cross-light was observed over all of the burners and the length of time it took for the burners to cross-light, records of maintaining a stable flame after a successful cross-light and the duration for which this was observed, records of any smoking events during the cross-light, waste gas temperature, meteorological conditions (*e.g.*, ambient temperature, barometric pressure, wind speed and direction, and relative humidity), and whether there were any observed flare flameouts; and

(F) You must install and operate pressure monitor(s) on the main flare header, as well as a valve position indicator monitoring system for each staging valve to ensure that the flare operates within the proper range of conditions as specified by the manufacturer. The pressure monitor must meet the requirements in Table 13 to subpart CC of this part.

(G) If a pressure-assisted multi-point flare is operating under the requirements of an approved alternative means of emission limitations, you must either continue to comply with the terms of the alternative means of emission limitations or comply with the provisions in paragraphs (e)(5)(viii)(A) through (F) of this section.

(ix) If you choose to determine compositional analysis for net heating value with a continuous process mass spectrometer, then you must comply with the requirements specified in paragraphs (e)(5)(ix)(A) through (G) of this section.

(A) You must meet the requirements in § 63.671(e)(2). You may augment the minimum list of calibration gas components found in § 63.671(e)(2) with compounds found during a pre-survey or known to be in the gas through process knowledge.

(B) Calibration gas cylinders must be certified to an accuracy of 2 percent and traceable to National Institute of Standards and Technology (NIST) standards.

(C) For unknown gas components that have similar analytical mass fragments to calibration compounds, you may report the unknowns as an increase in the overlapped calibration gas compound. For unknown compounds that produce mass fragments that do not overlap calibration compounds, you may use the response factor for the nearest molecular weight hydrocarbon in the calibration mix to quantify the unknown component's NHV<sub>g</sub>.

(D) You may use the response factor for n-pentane to quantify any unknown components detected with a higher molecular weight than n-pentane.

(E) You must perform an initial calibration to identify mass fragment overlap and response factors for the target compounds.

(F) You must meet applicable requirements in Performance Specification 9 of 40 CFR part 60, appendix B, for continuous monitoring system acceptance including, but not limited to, performing an initial multi-point calibration check at three concentrations following the procedure in Section 10.1 and performing the periodic calibration requirements listed for gas chromatographs in Table 13 to subpart CC of this part, for the process mass spectrometer. You may use the alternative sampling line temperature allowed under Net Heating Value by Gas Chromatograph in Table 13 to subpart CC of this part.

(G) The average instrument calibration error (CE) for each calibration compound at any calibration concentration must not differ by more than 10 percent from the certified cylinder gas value. The CE for each component in the calibration blend must be calculated using Equation 1 to this paragraph (e)(5)(ix)(G).

$$CE = \frac{c_m - c_a}{c_a} \times 100 \text{ (Eq. 1)}$$

Where:

C<sub>m</sub> = Average instrument response (ppm).

C<sub>a</sub> = Certified cylinder gas value (ppm).

(x) If you use a gas chromatograph or mass spectrometer for compositional analysis for net heating value, then you may choose to use the CE of NHV<sub>measured</sub> versus the cylinder tag value NHV as the measure of agreement for daily calibration and quarterly audits in lieu of determining the compound-specific CE. The CE for NHV at any calibration level must not differ by more than 10 percent from the certified cylinder gas value. The CE for must be calculated using Equation 2 to this paragraph (e)(5)(x).

$$CE = \frac{NHV_{measured} - NHV_a}{NHV_a} \times 100 \text{ (Eq. 2)}$$

Where:

NHV<sub>measured</sub> = Average instrument response (Btu/scf).

NHV<sub>a</sub> = Certified cylinder gas value (Btu/scf).

(xi) Instead of complying with paragraph (q) of § 63.670 of subpart CC, you must comply with the reporting requirements specified in § 63.2520(d)(3) and (e)(11).

(xii) Instead of complying with paragraph (p) of § 63.670 of subpart CC, you must keep the flare monitoring records specified in § 63.2525(m).

(xiii) You may elect to comply with the alternative means of emissions limitation requirements specified in paragraph (r) of § 63.670 of subpart CC in lieu of the requirements in paragraphs (d) through (f) of § 63.670 of subpart CC, as applicable. However, instead of complying with paragraph (r)(3)(iii) of § 63.670 of subpart CC, you must also submit the alternative means of emissions limitation request to the following address: U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs

Division, U.S. EPA Mailroom (C404-02), Attention: Miscellaneous Organic Chemical Manufacturing Sector Lead, 4930 Old Page Rd., Durham, NC 27703.

(6) Beginning no later than the compliance dates specified in § 63.2445(g), the use of a bypass line at any time on a closed vent system to divert emissions subject to the requirements in Tables 1 through 7 to this subpart to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 to this subpart is an emissions standards deviation. You must also comply with the requirements specified in paragraphs (e)(6)(i) through (v) of this section, as applicable:

(i) If you are subject to the bypass monitoring requirements of § 63.148(f) of subpart G, then you must continue to comply with the requirements in § 63.148(f) of subpart G and the recordkeeping and reporting requirements in §§ 63.148(j)(2) and (3) of subpart G, and ~~§ 63.148(h)(i)(3)~~ of subpart G, in addition to the applicable requirements specified in § 63.2485(q), the recordkeeping requirements specified in § 63.2525(n), and the reporting requirements specified in § 63.2520(e)(12).

(ii) If you are subject to the bypass monitoring requirements of § 63.172(j) of subpart H, then you must continue to comply with the requirements in § 63.172(j) of subpart H and the recordkeeping and reporting requirements in § 63.118(a)(3) and (4), and (f)(3) and (4) of subpart G, in addition to the applicable requirements specified in §§ 63.2480(f) and 63.2485(q), the recordkeeping requirements specified in § 63.2525(n), and the reporting requirements specified in § 63.2520(e)(12).

(iii) If you are subject to the bypass monitoring requirements of § 63.983(a)(3) of subpart SS, then you must continue to comply with the requirements in § 63.983(a)(3) of subpart SS and the recordkeeping and reporting requirements in §§ 63.998(d)(1)(ii) and 63.999(c)(2) of subpart

SS, in addition to the requirements specified in § 63.2450(e)(4), the recordkeeping requirements specified in § 63.2525(n), and the reporting requirements specified in § 63.2520(e)(12).

(iv) If you are subject to the bypass monitoring requirements of § 65.143(a)(3) of this chapter, then you must continue to comply with the requirements in § 65.143(a)(3) and the recordkeeping and reporting requirements in §§ 65.163(a)(1) and 65.166(b) of this chapter; in addition to the applicable requirements specified in § 63.2480(f), the recordkeeping requirements specified in § 63.2525(n), and the reporting requirements specified in § 63.2520(e)(12).

(v) For purposes of compliance with this paragraph (e)(6), §§ 63.148(f)(3) of subpart G, and 63.172(j)(3) of subpart H, the phrase “Except for equipment needed for safety purposes such as pressure relief devices, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines” in § 63.983(a)(3) of subpart SS, and the phrase “Except for pressure relief devices needed for safety purposes, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines” in § 65.143(a)(3) of this chapter do not apply; instead, the exemptions specified in paragraphs (e)(6)(v)(A) and (B) of this section apply.

(A) Except for pressure relief devices subject to § 63.2480(e)(4), equipment such as low leg drains and equipment subject to the requirements specified in § 63.2480 are not subject to this paragraph (e)(6).

(B) Open-ended valves or lines that use a cap, blind flange, plug, or second valve and follow the requirements specified in 40 CFR 60.482-6(a)(2), (b), and (c) or follow requirements codified in another regulation that are the same as 40 CFR 60.482-6(a)(2), (b), and (c) are not subject to this paragraph (e)(6).

(7) Beginning no later than the compliance dates specified in § 63.2445(g), if you reduce organic HAP emissions by venting emissions through a closed-vent system to an adsorber(s) that

cannot be regenerated or a regenerative adsorber(s) that is regenerated offsite, then you must comply with paragraphs (e)(4) and (6) of this section, § 63.2470(c)(3), §§ 63.2520(d)(6) and (e)(13), § 63.2525(o), and the requirements in § 63.983 including the requirements referenced therein, and you must install a system of two or more adsorber units in series and comply with the requirements specified in paragraphs (e)(7)(i) through (iii) of this section.

(i) Conduct an initial performance test or design evaluation of the adsorber and establish the breakthrough limit and adsorber bed life.

(ii) Monitor the HAP or total organic compound (TOC) concentration through a sample port at the outlet of the first adsorber bed in series according to the schedule in paragraph (e)(7)(iii)(B) of this section. You must measure the concentration of HAP or TOC using either a portable analyzer, in accordance with Method 21 of 40 CFR part 60, appendix A-7, using methane, propane, isobutylene, or the primary HAP being controlled as the calibration gas or Method 25A of 40 CFR part 60, appendix A-7, using methane, propane, or the primary HAP being controlled as the calibration gas.

(iii) Comply with paragraph (e)(7)(iii)(A) of this section, and comply with the monitoring frequency according to paragraph (e)(7)(iii)(B) of this section.

(A) The first adsorber in series must be replaced immediately when breakthrough, as defined in § 63.2550(i), 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)(7)(iii)(A), “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. You must

monitor at the outlet of the first adsorber within 3 days of replacement to confirm it is performing properly.

(B) Based on the adsorber bed life established according to paragraph (e)(7)(i) of this section and the date the adsorbent was last replaced, conduct monitoring to detect breakthrough at least monthly if the adsorbent has more than 2 months of life remaining, at least weekly if the adsorbent has between 2 months and 2 weeks of life remaining, and at least daily if the adsorbent has 2 weeks or less of life remaining.

(f) **Requirements for flare compliance assessments.** Except as specified in paragraph (e)(5) of this section, you must comply with paragraphs (f)(1) and (2) of this section.

(1) As part of a flare compliance assessment required in § 63.987(b), you have the option of demonstrating compliance with the requirements of § 63.11(b) by complying with the requirements in either § 63.11(b)(6)(i) or § 63.987(b)(3)(ii).

(2) If you elect to meet the requirements in § 63.11(b)(6)(i), you must keep flare compliance assessment records as specified in paragraphs (f)(2)(i) and (ii) of this section.

(i) Keep records as specified in § 63.998(a)(1)(i), except that a record of the heat content determination is not required.

(ii) Keep records of the flare diameter, hydrogen content, exit velocity, and maximum permitted velocity. Include these records in the flare compliance report required in § 63.999(a)(2).

(g) **Requirements for performance tests.** The requirements specified in paragraphs (g)(1) through (7) of this section apply instead of or in addition to the requirements specified in subpart SS of this part.

(1) Conduct gas molecular weight analysis using Method 3, 3A, or 3B in appendix A to part 60 of this chapter.

(2) Measure moisture content of the stack gas using Method 4 in appendix A to part 60 of this chapter.

(3) If the uncontrolled or inlet gas stream to the control device contains carbon disulfide, you must conduct emissions testing according to paragraph (g)(3)(i) or (ii) of this section.

(i) If you elect to comply with the percent reduction emission limits in tables 1 through 7 to this subpart, and carbon disulfide is the principal organic HAP component (*i.e.*, greater than 50 percent of the HAP in the stream by volume), then you must use Method 18, or Method 15 (40 CFR part 60, appendix A) to measure carbon disulfide at the inlet and outlet of the control device. Use the percent reduction in carbon disulfide as a surrogate for the percent reduction in total organic HAP emissions.

(ii) If you elect to comply with the outlet TOC concentration emission limits in Tables 1 through 7 to this subpart, and the uncontrolled or inlet gas stream to the control device contains greater than 10 percent (volume concentration) carbon disulfide, you must use Method 18 or Method 15 of 40 CFR part 60, appendix A, to separately determine the carbon disulfide concentration. Calculate the total HAP or TOC emissions by totaling the carbon disulfide emissions measured using Method 18 or 15 of 40 CFR part 60, appendix A, and the other HAP emissions measured using Method 18 or 25A of 40 CFR part 60, appendix A.

(4) As an alternative to using Method 18, Method 25/25A, or Method 26/26A of 40 CFR part 60, appendix A, to comply with any of the emission limits specified in tables 1 through 7 to this subpart, you may use Method 320 of 40 CFR part 60, appendix A. When using Method 320,

you must follow the analyte spiking procedures of section 13 of Method 320, unless you demonstrate that the complete spiking procedure has been conducted at a similar source.

(5) Section 63.997(c)(1) does not apply. For the purposes of this subpart, results of all initial compliance demonstrations must be included in the notification of compliance status report, which is due 150 days after the compliance date, as specified in § 63.2520(d)(1). If the initial compliance demonstration includes a performance test and the results are submitted electronically via CEDRI in accordance with § 63.2520(f), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(6) Beginning no later than the compliance dates specified in § 63.2445(g), in lieu of the requirements specified in § 63.7(e)(1) of subpart A you must conduct performance tests under such conditions as the Administrator specifies based on representative performance of the affected source for the period being tested. Representative conditions exclude periods of startup and shutdown. You may not conduct performance tests during periods of malfunction. You must record the process information that is necessary to document operating conditions during the test and include in such record an explanation to support that such conditions represent normal operation. Upon request, you must make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(7) Comply with the requirements in § 63.2450(e)(4), as applicable.

(h) **Design evaluation.** To determine the percent reduction of a small control device that is used to comply with an emission limit specified in Table 1, 2, 3, or 5 to this subpart, you may

elect to conduct a design evaluation as specified in § 63.1257(a)(1) instead of a performance test as specified in subpart SS of this part. You must establish the value(s) and basis for the operating limits as part of the design evaluation. For continuous process vents, the design evaluation must be conducted at maximum representative operating conditions for the process, unless the Administrator specifies or approves alternate operating conditions. For transfer racks, the design evaluation must demonstrate that the control device achieves the required control efficiency during the reasonably expected maximum transfer loading rate. Beginning no later than the compliance dates specified in § 63.2445(i), this paragraph (h) does not apply to process vents in ethylene oxide service as defined in § 63.2550.

(i) ***Outlet concentration correction for combustion devices.*** Except as specified in paragraph (i)(3) of this section, when § 63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3-percent oxygen if you add supplemental combustion air, the requirements in either paragraph (i)(1) or (2) of this section apply for the purposes of this subpart.

(1) You must correct the concentration in the gas stream at the outlet of the combustion device to 3 percent oxygen if you add supplemental gases, as defined in § 63.2550, to the vent stream, or;

(2) You must correct the measured concentration for supplemental gases using Equation 1 in § 63.2460(c)(6); you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

(3) Beginning no later than the compliance dates specified in § 63.2445(g), paragraphs (i)(1) and (2) of this section no longer apply. Instead, when § 63.997(e)(2)(iii)(C) requires you to correct the measured concentration at the outlet of a combustion device to 3-percent oxygen if

you add supplemental combustion air, you must follow the procedures in § 63.997(e)(2)(iii)(C) to perform the concentration correction, except you may also use Method 3A of 40 CFR part 60, appendix A-2, to determine the oxygen concentration.

(j) ***Continuous emissions monitoring systems.*** Each continuous emissions monitoring system (CEMS) must be installed, operated, and maintained according to the requirements in § 63.8 of subpart A and paragraphs (j)(1) through (6) of this section.

(1) Each CEMS must be installed, operated, and maintained according to the applicable Performance Specification of 40 CFR part 60, appendix B, and the applicable Quality Assurance Procedures of 40 CFR part 60, appendix F, and according to paragraph (j)(2) of this section, except as specified in paragraph (j)(1)(i) of this section. For any CEMS meeting Performance Specification 8 of 40 CFR part 60, appendix B, you must also comply with procedure 1 of 40 CFR part 60, appendix F. Locate the sampling probe or other interface at a measurement location such that you obtain representative measurements of emissions from the regulated source. For CEMS installed after August 12, 2020, conduct a performance evaluation of each CEMS within 180 days of installation of the monitoring system.

(i) If you wish to use a CEMS other than a Fourier Transform Infrared Spectroscopy (FTIR) meeting the requirements of Performance Specification 15 of 40 CFR part 60, appendix B, to measure hydrogen halide, other than hydrogen chloride, and halogen HAP or CEMS meeting the requirements of Performance Specification 18 of 40 CFR part 60, appendix B, to measure hydrogen chloride before we promulgate a Performance Specification for such CEMS, you must prepare a monitoring plan and submit it for approval in accordance with the procedures specified in § 63.8 of subpart A.

(ii) [Reserved]

(2) You must determine the calibration gases and reporting units for TOC CEMS in accordance with paragraph (j)(2)(i), (ii), or (iii) of this section.

(i) For CEMS meeting Performance Specification 9 or 15 requirements, determine the target analyte(s) for calibration using either process knowledge of the control device inlet stream or the screening procedures of Method 18 on the control device inlet stream.

(ii) For CEMS meeting Performance Specification 8 used to monitor performance of a combustion device, calibrate the instrument on the predominant organic HAP and report the results as carbon (C<sub>1</sub>), and use Method 25A or any approved alternative as the reference method for the relative accuracy tests.

(iii) For CEMS meeting Performance Specification 8 of 40 CFR part 60, appendix B, used to monitor performance of a noncombustion device, determine the predominant organic HAP using either process knowledge or the screening procedures of Method 18 of 40 CFR part 60, appendix A-6, on the control device inlet stream, calibrate the monitor on the predominant organic HAP, and report the results as C<sub>1</sub>. Use Method 18 of 40 CFR part 60, appendix A-6, Method 320 of appendix A to this part, ASTM D6420-18 (incorporated by reference, see § 63.14), or any approved alternative as the reference method for the relative accuracy tests, and report the results as C<sub>1</sub>.

(3) You must conduct a performance evaluation of each CEMS according to the requirements in § 63.8 of subpart A and according to the applicable Performance Specification of 40 CFR part 60, appendix B, except that the schedule in § 63.8(e)(4) of subpart A does not apply, and before October 13, 2020, the results of the performance evaluation must be included in the notification of compliance status report. Unless otherwise specified in this subpart, beginning on

and after October 13, 2020, the results of the performance evaluation must be submitted in accordance with § 63.2520(g).

(4) The CEMS data must be reduced to operating day or operating block averages computed using valid data consistent with the data availability requirements specified in § 63.999(c)(6)(i)(B) through (D), except monitoring data also are sufficient to constitute a valid hour of data if measured values are available for at least two of the 15-minute periods during an hour when calibration, quality assurance, or maintenance activities are being performed. An operating block is a period of time from the beginning to end of batch operations within a process. Operating block averages may be used only for batch process vent data. In computing operating day or operating block averages to determine compliance with this subpart, you must exclude monitoring data recorded during CEMS breakdowns, out-of-control periods, repairs, maintenance periods, calibration checks, or other quality assurance activities. Out-of-control periods are as specified in § 63.8(c)(7) of subpart A.

(5) If you add supplemental gases, you must comply with paragraphs (j)(5)(i) and (ii) of this section.

(i) Except as specified in paragraph (j)(5)(ii) of this section, correct the measured concentrations in accordance with paragraph (i) of this section and § 63.2460(c)(6).

(ii) Beginning no later than the compliance dates specified in § 63.2445(g), you must use Performance Specification 3 of 40 CFR part 60, appendix B, to certify your oxygen CEMS, and you must comply with procedure 1 of 40 CFR part 60, appendix F. Use Method 3A of 40 CFR part 60, appendix A-2, as the reference method when conducting a relative accuracy test audit.

(6) Beginning no later than the compliance dates specified in § 63.2445(g), in lieu of the requirements specified in § 63.8(d)(3) of subpart A you must keep the written procedures

required by § 63.8(d)(2) of subpart A on record for the life of the affected source or until the affected source is no longer subject to the provisions of this part, to be made available for inspection, upon request, by the Administrator. If the performance evaluation plan is revised, you must keep previous (*i.e.*, superseded) versions of the performance evaluation plan on record to be made available for inspection, upon request, by the Administrator, for a period of 5 years after each revision to the plan. The program of corrective action should be included in the plan required under § 63.8(d)(2) of subpart A. In addition to the information required in § 63.8(d)(2) of subpart A, your written procedures for CEMS must include the information in paragraphs (j)(6)(i) through (vi) of this section:

(i) Description of CEMS installation location.

(ii) Description of the monitoring equipment, including the manufacturer and model number for all monitoring equipment components and the span of the analyzer.

(iii) Routine quality control and assurance procedures.

(iv) Conditions that would trigger a CEMS performance evaluation, which must include, at a minimum, a newly installed CEMS; a process change that is expected to affect the performance of the CEMS; and the Administrator's request for a performance evaluation under section 114 of the Clean Air Act.

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

(vi) Ongoing recordkeeping and reporting procedures in accordance with the general requirements of § 63.10(c) and (e)(1) of subpart A.

(k) ***Continuous parameter monitoring.*** The provisions in paragraphs (k)(1) through (8) of this section apply in addition to the requirements for continuous parameter monitoring system (CPMS) in subpart SS of this part.

(1) You must comply with paragraphs (k)(1)(i) and (ii) of this section.

(i) Except as specified in paragraph (k)(1)(ii) of this section, record the results of each calibration check and all maintenance performed on the CPMS as specified in § 63.998(c)(1)(ii)(A).

(ii) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (k)(1)(i) of this section no longer applies. Instead, you must record the results of each calibration check and all maintenance performed on the CPMS as specified in § 63.998(c)(1)(ii)(A), except you must record all maintenance, not just preventative maintenance.

(2) When subpart SS of this part 63 uses the term “a range” or “operating range” of a monitored parameter, it means an “operating limit” for a monitored parameter for the purposes of this subpart.

(3) As an alternative to continuously measuring and recording pH as specified in §§ 63.994(c)(1)(i) and 63.998(a)(2)(ii)(D), you may elect to continuously monitor and record the caustic strength of the effluent. For halogen scrubbers used to control only batch process vents you may elect to monitor and record either the pH or the caustic strength of the scrubber effluent at least once per day.

(4) As an alternative to the inlet and outlet temperature monitoring requirements for catalytic incinerators as specified in § 63.988(c)(2) and the related recordkeeping requirements specified in § 63.998(a)(2)(ii)(B)(2) and (c)(2)(ii), you may elect to comply with the requirements specified in paragraphs (k)(4)(i) through (iv) of this section.

(i) Monitor and record the inlet temperature as specified in subpart SS of this part 63.

(ii) Check the activity level of the catalyst at least every 12 months and take any necessary corrective action, such as replacing the catalyst to ensure that the catalyst is performing as designed.

(iii) Maintain records of the annual checks of catalyst activity levels and the subsequent corrective actions.

(iv) Recording the downstream temperature and temperature difference across the catalyst bed as specified in § 63.998(a)(2)(ii)(B)(2) and (c)(2)(ii) is not required.

(5) For absorbers that control organic compounds and use water as the scrubbing fluid, you must conduct monitoring and recordkeeping as specified in paragraphs (k)(5)(i) through (iii) of this section instead of the monitoring and recordkeeping requirements specified in §§ 63.990(c)(1), 63.993(c)(1), and 63.998(a)(2)(ii)(C).

(i) You must use a flow meter capable of providing a continuous record of the absorber influent liquid flow.

(ii) You must determine gas stream flow using one of the procedures specified in § 63.994(c)(1)(ii)(A) through (D).

(iii) You must record the absorber liquid-to-gas ratio averaged over the time period of any performance test.

(6) For a control device with total inlet HAP emissions less than 1 tpy, you must establish an operating limit(s) for a parameter(s) that you will measure and record at least once per averaging period (*i.e.*, daily or block) to verify that the control device is operating properly. You may elect to measure the same parameter(s) that is required for control devices that control inlet HAP emissions equal to or greater than 1 tpy. If the parameter will not be measured

continuously, you must request approval of your proposed procedure in the precompliance report. You must identify the operating limit(s) and the measurement frequency, and you must provide rationale to support how these measurements demonstrate the control device is operating properly.

(7) Beginning no later than the compliance dates specified in § 63.2445(g), the manufacturer's specifications or your written procedures must include a schedule for calibrations, preventative maintenance procedures, a schedule for preventative maintenance, and corrective actions to be taken if a calibration fails. If a CPMS calibration fails, the CPMS is considered to be inoperative until you take corrective action and the system passes calibration. You must record the nature and cause of instances when the CPMS is inoperative and the corrective action taken.

(8) You must comply with the requirements in paragraph (e)(4) of this section, as applicable.

(l) **Startup, shutdown, and malfunction.** Sections 63.152(f)(7)(ii) through (iv) and 63.998(b)(2)(iii) and (b)(6)(i)(A), which apply to the exclusion of monitoring data collected during periods of SSM from daily averages, do not apply for the purposes of this subpart.

(m) **Reporting.**

(1) When §§ 63.2455 through 63.2490 reference other subparts in this part 63 that use the term "periodic report," it means "compliance report" for the purposes of this subpart. The compliance report must include the information specified in § 63.2520(e), as well as the information specified in referenced subparts.

(2) When there are conflicts between this subpart and referenced subparts for the due dates of reports required by this subpart, reports must be submitted according to the due dates presented in this subpart.

(3) Excused excursions, as defined in subparts G and SS of this part 63, are not allowed.

(n) [Reserved]

(o) You may not use a flare to control halogenated vent streams or hydrogen halide and halogen HAP emissions.

(p) **Original safety device requirements.** Except as specified in paragraph (t) of this section, opening a safety device, as defined in § 63.2550, is allowed at any time conditions require it to avoid unsafe conditions.

(q) If an emission stream contains energetics or organic peroxides that, for safety reasons, cannot meet an applicable emission limit specified in Tables 1 through 7 to this subpart, then you must submit documentation in your precompliance report explaining why an undue safety hazard would be created if the air emission controls were installed, and you must describe the procedures that you will implement to minimize HAP emissions from these vent streams.

(r) **Surge control vessels and bottoms receivers.** For each surge control vessel or bottoms receiver that meets the capacity and vapor pressure thresholds for a Group 1 storage tank, you must meet emission limits and work practice standards specified in Table 4 to this subpart. Beginning no later than the compliance dates specified in § 63.2445(i), for each surge control vessel and bottoms receiver in ethylene oxide service as defined in § 63.2550, you must also meet the applicable process vent requirements specified in §§ 63.2492 and 63.2493(a) through (c).

(s) For the purposes of determining Group status for continuous process vents, batch process vents, and storage tanks in §§ 63.2455, 63.2460, and 63.2470, hydrazine is to be considered an organic HAP.

(t) ***New safety device requirements.*** Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (p) of this section no longer applies. Instead, you must comply with the requirements specified in § 63.2480(e).

(u) ***General duty.*** Beginning no later than the compliance dates specified in § 63.2445(g), at all times, you must operate and maintain any affected source, including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. The general duty to minimize emissions does not require you to make any further efforts to reduce emissions if levels required by the applicable standard have been achieved. Determination of whether a source is operating in compliance with operation and maintenance requirements will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

(v) ***Maintenance vents.*** Beginning no later than the compliance dates specified in § 63.2445(g), you may designate a process vent as a maintenance vent if the vent is only used as a result of startup, shutdown, maintenance, or inspection of equipment where equipment is emptied, depressurized, degassed, or placed into service. You must comply with the applicable requirements in paragraphs (v)(1) through (3) of this section for each maintenance vent. Any vent designated as a maintenance vent is only subject to the maintenance vent provisions in this paragraph (v) and the associated recordkeeping and reporting requirements in §§ 63.2525(p) and

63.2520(e)(14), respectively. You do not need to designate a maintenance vent as a Group 1 or Group 2 process vent nor identify maintenance vents in a Notification of Compliance Status report.

(1) Prior to venting to the atmosphere, remove process liquids from the equipment as much as practical and depressurize the equipment to either: A flare meeting the requirements of paragraph (e)(2) or (5) of this section, as applicable, or a non-flare control device meeting the requirements in paragraph (e)(4) of this section and the requirements specified in § 63.982(c)(2) of subpart SS until one of the following conditions, as applicable, is met.

(i) The vapor in the equipment served by the maintenance vent has a ~~lower explosive limit (LEL)-of-concentration~~ less than 10 percent ~~of its lower explosive limit (LEL)~~ and has an outlet concentration less than or equal to 20 ppmv hydrogen halide and halogen HAP.

(ii) If there is no ability to measure the ~~LEL-concentration~~ of the vapor in the equipment based on the design of the equipment, the pressure in the equipment served by the maintenance vent is reduced to 5 pounds per square inch gauge (psig) or less. Upon opening the maintenance vent, active purging of the equipment cannot be used until the ~~LEL-concentration~~ of the vapors in the maintenance vent (or inside the equipment if the maintenance is a hatch or similar type of opening) is less than 10 percent ~~of its LEL~~.

(iii) The equipment served by the maintenance vent contains less than 50 pounds of total volatile organic compounds (VOC).

(iv) If, after applying best practices to isolate and purge equipment served by a maintenance vent, none of the applicable criterion in paragraphs (v)(1)(i) through (iii) of this section can be met prior to installing or removing a blind flange or similar equipment blind, then the pressure in the equipment served by the maintenance vent must be reduced to 2 psig or less

before installing or removing the equipment blind. During installation or removal of the equipment blind, active purging of the equipment may be used provided the equipment pressure at the location where purge gas is introduced remains at 2 psig or less.

(2) Except for maintenance vents complying with the alternative in paragraph (v)(1)(iii) of this section, you must determine the LEL-concentration of the vapor or, if applicable, equipment pressure using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(3) For maintenance vents complying with the alternative in paragraph (v)(1)(iii) of this section, you must determine mass of VOC in the equipment served by the maintenance vent based on the equipment size and contents after considering any contents drained or purged from the equipment. Equipment size may be determined from equipment design specifications. Equipment contents may be determined using process knowledge.

**§ 63.2455 What requirements must I meet for continuous process vents?**

(a) You must meet each emission limit in Table 1 to this subpart that applies to your continuous process vents, and you must meet each applicable requirement specified in paragraphs (b) through (c) of this section and §§ 63.2492 and 63.2493(a) through (c).

(b) For each continuous process vent, you must either designate the vent as a Group 1 continuous process vent or determine the total resource effectiveness (TRE) index value as specified in § 63.115(d), except as specified in paragraphs (b)(1) through (3) of this section.

(1) You are not required to determine the Group status or the TRE index value for any continuous process vent that is combined with Group 1 batch process vents before a control device or recovery device because the requirements of § 63.2450(c)(2)(i) apply to the combined stream.

(2) When a TRE index value of 4.0 is referred to in § 63.115(d), TRE index values of 5.0 for existing affected sources and 8.0 for new and reconstructed affected sources apply for the purposes of this subpart.

(3) When § 63.115(d) refers to “emission reductions specified in § 63.113(a),” the reductions specified in Table 1 to this subpart apply for the purposes of this subpart.

(c) If you use a recovery device to maintain the TRE above a specified threshold, you must meet the requirements of § 63.982(e) and the requirements referenced therein, except as specified in § 63.2450 and paragraph (c)(1) of this section.

(1) When § 63.993 uses the phrase “the TRE index value is between the level specified in a referencing subpart and 4.0,” the phrase “the TRE index value is  $>1.9$  but  $\leq 5.0$ ” applies for an existing affected source, and the phrase “the TRE index value is  $>5.0$  but  $\leq 8.0$ ” applies for a new and reconstructed affected source, for the purposes of this subpart.

(2) [Reserved]

**§ 63.2460 What requirements must I meet for batch process vents?**

(a) **General.** You must meet each emission limit in Table 2 to this subpart that applies to you, and you must meet each applicable requirement specified in paragraphs (b) and (c) of this section and §§ 63.2492 and 63.2493(a) through (c).

(b) **Group status.** If a process has batch process vents, as defined in § 63.2550, you must determine the group status of the batch process vents by determining and summing the uncontrolled organic HAP emissions from each of the batch process vents within the process using the procedures specified in § 63.1257(d)(2)(i) and (ii), except as specified in paragraphs (b)(1) through (7) of this section.

(1) To calculate emissions caused by the heating of a vessel without a process condenser to a temperature lower than the boiling point, you must use the procedures in § 63.1257(d)(2)(i)(C)(3).

(2) To calculate emissions from depressurization of a vessel without a process condenser, you must use the procedures in § 63.1257(d)(2)(i)(D)(10).

(3) To calculate emissions from vacuum systems for the purposes of this subpart, the receiving vessel is part of the vacuum system, and terms used in Equation 33 to 40 CFR part 63, subpart GGG, are defined as follows:

$P_{\text{system}}$  = absolute pressure of the receiving vessel;

$P_i$  = partial pressure of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;

$P_j$  = partial pressure of condensables (including HAP) determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver;

$MW_{\text{HAP}}$  = molecular weight of the HAP determined at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(4) To calculate uncontrolled emissions when a vessel is equipped with a process condenser, you must use the procedures in § 63.1257(d)(3)(i)(B), except as specified in paragraphs (b)(4)(i) through (vii) of this section.

(i) You must determine the flowrate of gas (or volume of gas), partial pressures of condensables, temperature (T), and HAP molecular weight ( $MW_{\text{HAP}}$ ) at the exit temperature and exit pressure conditions of the condenser or at the conditions of the dedicated receiver.

(ii) You must assume that all of the components contained in the condenser exit vent stream are in equilibrium with the same components in the exit condensate stream (except for noncondensables).

(iii) You must perform a material balance for each component.

(iv) For the emissions from gas evolution, the term for time,  $t$ , must be used in Equation 12 to 40 CFR part 63, subpart GGG.

(v) Emissions from empty vessel purging shall be calculated using Equation 36 to 40 CFR part 63, subpart GGG and the exit temperature and exit pressure conditions of the condenser or the conditions of the dedicated receiver.

(vi) You must conduct an engineering assessment as specified in § 63.1257(d)(2)(ii) for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum operations, gas evolution, air drying, or empty vessel purging. The requirements of paragraphs (b)(3) through (4) of this section shall apply.

(vii) You may elect to conduct an engineering assessment if you can demonstrate to the Administrator that the methods in § 63.1257(d)(3)(i)(B) are not appropriate.

(5) You may elect to designate the batch process vents within a process as Group 1 and not calculate uncontrolled emissions if you comply with one of the situations in paragraph (b)(5)(i), (ii), or (iii) of this section.

(i) If you comply with the alternative standard specified in § 63.2505.

(ii) If all Group 1 batch process vents within a process are controlled; you conduct the performance test under hypothetical worst case conditions, as defined in § 63.1257(b)(8)(i)(B); and the emission profile is based on capture and control system limitations as specified in § 63.1257(b)(8)(ii)(C).

(iii) If you comply with an emission limit using a flare that meets the requirements specified in § 63.987 or § 63.2450(e)(5), as applicable.

(6) You may change from Group 2 to Group 1 in accordance with either paragraph (b)(6)(i) or (ii) of this section. Before October 13, 2020, you must comply with the requirements of this section and submit the test report. Beginning on and after October 13, 2020, you must comply with the requirements of this section and submit the performance test report for the demonstration required in § 63.1257(b)(8) in accordance with § 63.2520(f).

(i) You may switch at any time after operating as Group 2 for at least 1 year so that you can show compliance with the 10,000 pounds per year (lb/yr) threshold for Group 2 batch process vents for at least 365 days before the switch. You may elect to start keeping records of emissions from Group 2 batch process vents before the compliance date. Report a switch based on this provision in your next compliance report in accordance with § 63.2520(e)(10)(i).

(ii) If the conditions in paragraph (b)(6)(i) of this section are not applicable, you must provide a 60-day advance notice in accordance with § 63.2520(e)(10)(ii) before switching.

(7) As an alternative to determining the uncontrolled organic HAP emissions as specified in § 63.1257(d)(2)(i) and (ii), you may elect to demonstrate that non-reactive organic HAP are the only HAP used in the process and non-reactive HAP usage in the process is less than 10,000 lb/yr. You must provide data and supporting rationale in your notification of compliance status report explaining why the non-reactive organic HAP usage will be less than 10,000 lb/yr. You must keep records of the non-reactive organic HAP usage as specified in § 63.2525(e)(2) and include information in compliance reports as specified in § 63.2520(e)(5)(iv).

(c) Exceptions to the requirements in subparts SS and WW of this part 63 are specified in paragraphs (c)(1) through (9) of this section.

(1) **Process condensers.** Process condensers, as defined in § 63.2550(i), are not considered to be control devices for batch process vents. You must determine whether a

condenser is a control device for a batch process vent or a process condenser from which the uncontrolled HAP emissions are evaluated as part of the initial compliance demonstration for each MCPU and report the results with supporting rationale in your notification of compliance status report.

**(2) *Initial compliance.***

(i) To demonstrate initial compliance with a percent reduction emission limit in Table 2 to this subpart, you must compare the sums of the controlled and uncontrolled emissions for the applicable Group 1 batch process vents within the process, and show that the specified reduction is met. This requirement does not apply if you comply with the emission limits of Table 2 to this subpart by using a flare that meets the requirements of § 63.987 or 63.2450(e)(5), as applicable.

(ii) When you conduct a performance test or design evaluation for a non-flare control device used to control emissions from batch process vents, you must establish emission profiles and conduct the test under worst-case conditions according to § 63.1257(b)(8) instead of under normal operating conditions as specified in § 63.7(e)(1) of subpart A or the conditions as specified in § 63.2450(g)(6). The requirements in § 63.997(e)(1)(i) and (iii) also do not apply for performance tests conducted to determine compliance with the emission limits for batch process vents. For purposes of this subpart, references in § 63.997(b)(1) to “methods specified in § 63.997(e)” include the methods specified in § 63.1257(b)(8).

(iii) As an alternative to conducting a performance test or design evaluation to demonstrate initial compliance with a percent reduction requirement for a condenser, you may determine controlled emissions using the procedures specified in § 63.1257(d)(3)(i)(B) and paragraphs (b)(3) through (4) of this section.

(iv) When § 63.1257(d)(3)(i)(B)(7) specifies that condenser-controlled emissions from an air dryer must be calculated using Equation 11 of 40 CFR part 63, subpart GGG, with “V equal to the air flow rate,” it means “V equal to the dryer outlet gas flow rate,” for the purposes of this subpart. Alternatively, you may use Equation 12 of 40 CFR part 63, subpart GGG, with V equal to the dryer inlet air flow rate. Account for time as appropriate in either equation.

(v) If a process condenser is used for boiling operations in which HAP (not as an impurity) is heated to the boiling point, you must demonstrate that it is properly operated according to the procedures specified in § 63.1257(d)(2)(i)(C)(4)(ii) and (d)(3)(iii)(B), and the demonstration must occur only during the boiling operation. The reference in § 63.1257(d)(3)(iii)(B) to the alternative standard in § 63.1254(c) means § 63.2505 for the purposes of this subpart. As an alternative to measuring the exhaust gas temperature, as required by § 63.1257(d)(3)(iii)(B), you may elect to measure the liquid temperature in the receiver.

(vi) You must conduct a subsequent performance test or compliance demonstration equivalent to an initial compliance demonstration within 180 days of a change in the worst-case conditions.

(3) **Establishing operating limits.** You must establish operating limits under the conditions required for your initial compliance demonstration, except you may elect to establish operating limit(s) for conditions other than those under which a performance test was conducted as specified in paragraph (c)(3)(i) of this section and, if applicable, paragraph (c)(3)(ii) of this section.

(i) The operating limits may be based on the results of the performance test and supplementary information such as engineering assessments and manufacturer's recommendations. These limits may be established for conditions as unique as individual

emission episodes for a batch process. You must provide rationale in the precompliance report for the specific level for each operating limit, including any data and calculations used to develop the limit and a description of why the limit indicates proper operation of the control device. The procedures provided in this paragraph (c)(3)(i) have not been approved by the Administrator and determination of the operating limit using these procedures is subject to review and approval by the Administrator.

(ii) If you elect to establish separate monitoring levels for different emission episodes within a batch process, you must maintain records in your daily schedule or log of processes indicating each point at which you change from one operating limit to another, even if the duration of the monitoring for an operating limit is less than 15 minutes. You must maintain a daily schedule or log of processes according to § 63.2525(c).

(4) ***Averaging periods.*** As an alternative to the requirement for daily averages in § 63.998(b)(3), you may determine averages for operating blocks. An operating block is a period of time that is equal to the time from the beginning to end of batch process operations within a process.

(5) [Reserved]

(6) ***Outlet concentration correction for supplemental gases.*** If you use a control device other than a combustion device to comply with a TOC, organic HAP, or hydrogen halide and halogen HAP outlet concentration emission limit for batch process vents, you must correct the actual concentration for supplemental gases using Equation 1 to this paragraph (e)(6); you may use process knowledge and representative operating data to determine the fraction of the total flow due to supplemental gas.

$$C_a = C_m \left( \frac{Q_s + Q_a}{Q_a} \right) \quad (\text{Eq. 1})$$

Where:

$C_a$  = corrected outlet TOC, organic HAP, or hydrogen halide and halogen HAP concentration, dry basis, ppmv;

$C_m$  = actual TOC, organic HAP, or hydrogen halide and halogen HAP concentration measured at control device outlet, dry basis, ppmv;

$Q_a$  = total volumetric flowrate of all gas streams vented to the control device, except supplemental gases;

$Q_s$  = total volumetric flowrate of supplemental gases.

(7) 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. Periods of no flow may not be used in daily or block averages, and it may not be used in fulfilling a minimum data availability requirement.

(8) **Terminology.** When the term “storage vessel” is used in subpart WW of this part 63, the term “process tank,” as defined in § 63.2550(i), applies for the purposes of this section.

(9) **Requirements for a biofilter.** If you use a biofilter to meet either the 95-percent reduction requirement or outlet concentration requirement specified in Table 2 to this subpart, you must meet the requirements specified in paragraphs (c)(9)(i) through ~~(vi)~~(iv) of this section.

(i) **Operational requirements.** The biofilter must be operated at all times when emissions are vented to it.

(ii) **Performance tests.** To demonstrate initial compliance, you must conduct a performance test according to the procedures in §§ 63.2450(g) and 63.997 of subpart SS, and paragraphs (c)(9)(ii)(A) through (D) of this section. The design evaluation option for small control devices is not applicable if you use a biofilter.

(A) Keep up-to-date, readily accessible continuous records of either the biofilter bed temperature averaged over the full period of the performance test or the outlet total organic HAP

or TOC concentration averaged over the full period of the performance test. Include these data in your notification of compliance status report as required by § 63.999(b)(3)(ii).

(B) Record either the percent reduction of total organic HAP achieved by the biofilter determined as specified in § 63.997(e)(2)(iv) or the concentration of TOC or total organic HAP determined as specified in § 63.997(e)(2)(iii) at the outlet of the biofilter, as applicable.

(C) If you monitor the biofilter bed temperature, you may elect to use multiple thermocouples in representative locations throughout the biofilter bed and calculate the average biofilter bed temperature across these thermocouples prior to reducing the temperature data to 15 minute (or shorter) averages for purposes of establishing operating limits for the biofilter. If you use multiple thermocouples, include your rationale for their site selection in your notification of compliance status report.

(D) Before October 13, 2020, submit a performance test report as specified in § 63.999(a)(2)(i) and (ii) and include the records from paragraph (c)(9)(ii)(B) of this section. Beginning on and after October 13, 2020, you must submit a performance test report as specified in § 63.2520(f).

(iii) **Monitoring requirements.** Use either a biofilter bed temperature monitoring device (or multiple devices) capable of providing a continuous record or an organic monitoring device capable of providing a continuous record. Comply with the requirements in § 63.2450(e)(4), the general requirements for monitoring in § 63.996, and keep records of temperature or other parameter monitoring results as specified in § 63.998(b) and (c), as applicable. If you monitor temperature, the operating temperature range must be based on only the temperatures measured during the performance test; these data may not be supplemented by engineering assessments or manufacturer's recommendations as otherwise allowed in § 63.999(b)(3)(ii)(A). If you establish

the operating range (minimum and maximum temperatures) using data from previous performance tests in accordance with § 63.996(c)(6), replacement of the biofilter media with the same type of media is not considered a process change under § 63.997(b)(1). You may expand your biofilter bed temperature operating range by conducting a repeat performance test that demonstrates compliance with the 95-percent reduction requirement or outlet concentration limit, as applicable.

(iv) ***Repeat performance tests.*** You must conduct a repeat performance test using the applicable methods specified in §§ 63.2450(g) and 63.997 within 2 years following the previous performance test and within 150 days after each replacement of any portion of the biofilter bed media with a different type of media or each replacement of more than 50 percent (by volume) of the biofilter bed media with the same type of media.

**§ 63.2465 What requirements must I meet for process vents that emit hydrogen halide and halogen HAP or HAP metals?**

(a) You must meet each emission limit in Table 3 to this subpart that applies to you, and you must meet each applicable requirement in paragraphs (b) through (d) of this section.

(b) If any process vents within a process emit hydrogen halide and halogen HAP, you must determine and sum the uncontrolled hydrogen halide and halogen HAP emissions from each of the process vents within the process using the procedures specified in § 63.1257(d)(2)(i) and/or (ii), as appropriate. When § 63.1257(d)(2)(ii)(E) requires documentation to be submitted in the precompliance report, it means the notification of compliance status report for the purposes of this paragraph.

(c) If collective uncontrolled hydrogen halide and halogen HAP emissions from the process vents within a process are greater than or equal to 1,000 pounds per year (lb/yr), you

must comply with the requirements in § 63.2450(e)(4) and the requirements of § 63.994 and the requirements referenced therein, except as specified in paragraphs (c)(1) through (3) of this section.

(1) When § 63.994(b)(1) requires a performance test, you may elect to conduct a design evaluation in accordance with § 63.1257(a)(1).

(2) When § 63.994(b)(1) refers to “a combustion device followed by a halogen scrubber or other halogen reduction device,” it means any combination of control devices used to meet the emission limits specified in Table 3 to this subpart.

(3) Section 63.994(b)(2) does not apply for the purposes of this section.

(d) To demonstrate compliance with the emission limit in Table 3 to this subpart for HAP metals at a new source, you must comply with paragraphs (d)(1) through (3) of this section.

(1) Determine the mass emission rate of HAP metals based on process knowledge, engineering assessment, or test data.

(2) Conduct an initial performance test of each control device that is used to comply with the emission limit for HAP metals specified in Table 3 to this subpart. Conduct the performance test according to the procedures in §§ 63.2450(g) and 63.997. Use Method 29 of 40 CFR part 60, appendix A, to determine the HAP metals at the inlet and outlet of each control device, or use Method 5 of 40 CFR part 60, appendix A, to determine the total particulate matter (PM) at the inlet and outlet of each control device. You may use ASTM D6784-02 (Reapproved 2008) (incorporated by reference, see § 63.14) as an alternative to Method 29 (portion for mercury only) as a method for measuring mercury concentrations of 0.5 to 100 micrograms per standard cubic meter. You have demonstrated initial compliance if the overall reduction of either HAP metals or total PM from the process is greater than or equal to 97 percent by weight.

(3) Comply with the monitoring requirements specified in § 63.1366(b)(1)(xi) for each fabric filter used to control HAP metals.

**§ 63.2470 What requirements must I meet for storage tanks?**

(a) **General.** You must meet each emission limit in Table 4 to this subpart that applies to your storage tanks, and except as specified in paragraph (b) of this section, you must also meet each applicable requirement specified in paragraphs (c) through (f) of this section and §§ 63.2492 and 63.2493(a) through (c).

(b) **General for storage tanks in ethylene oxide service.** On and after the compliance dates specified in § 63.2445(i), paragraphs (d) and (e) of this section do not apply to storage tanks in ethylene oxide service as defined in § 63.2550.

**(c) Exceptions to subparts SS and WW of this part.**

(1) Except as specified in paragraph (c)(4)(ii) of this section, if you conduct a performance test or design evaluation for a control device used to control emissions only from storage tanks, you must establish operating limits, conduct monitoring, and keep records using the same procedures as required in subpart SS of this part for control devices used to reduce emissions from process vents instead of the procedures specified in §§ 63.985(c), 63.998(d)(2)(i), and 63.999(b)(2). You must also comply with the requirements in § 63.2450(e)(4), as applicable.

(2) Except as specified in paragraph (c)(4) of this section, when the term “storage vessel” is used in subparts SS and WW of this part, the term “storage tank,” as defined in § 63.2550 applies for the purposes of this subpart.

(3) For adsorbers that cannot be regenerated or regenerative adsorbers that are regenerated offsite, you must comply with the monitoring requirements in § 63.2450(e)(7) in lieu of § 63.995(c).

(4) Beginning no later than the compliance dates specified in § 63.2445(i), you must comply with paragraphs (c)(4)(i) and (ii) of this section.

(i) The exemptions for “vessels storing organic liquids that contain HAP only as impurities” and “pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere” listed in the definition of “storage tank” in § 63.2550 do not apply for storage tanks in ethylene oxide service.

(ii) For storage tanks in ethylene oxide service as defined in § 63.2550, you may not use a design evaluation to determine the percent reduction of any control device that is used to comply with an emission limit specified in Table 4 to this subpart.

(d) ***Planned routine maintenance.*** The emission limits in Table 4 to this subpart for control devices used to control emissions from storage tanks do not apply during periods of planned routine maintenance. Periods of planned routine maintenance of each control device, during which the control device does not meet the emission limit specified in Table 4 to this subpart, must not exceed 240 hours per year (hr/yr). You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr. The application must explain why the extension is needed, it must indicate that no material will be added to the storage tank between the time the 240-hr limit is exceeded and the control device is again operational, and it must be submitted at least 60 days before the 240-hr limit will be exceeded.

(e) ***Vapor balancing alternative.*** As an alternative to the emission limits specified in Table 4 to this subpart, you may elect to implement vapor balancing in accordance with § 63.1253(f), except as specified in paragraphs (e)(1) through (3) of this section.

(1) When § 63.1253(f)(6)(i) refers to a 90 percent reduction, 95 percent applies for the purposes of this subpart.

(2) To comply with § 63.1253(f)(6)(i), the owner or operator of an offsite cleaning or reloading facility must comply with §§ 63.2445 through 63.2550 instead of complying with § 63.1253(f)(7)(ii), except as specified in paragraph (e)(2)(i) or (ii) of this section.

(i) The reporting requirements in § 63.2520 do not apply to the owner or operator of the offsite cleaning or reloading facility.

(ii) As an alternative to complying with the monitoring, recordkeeping, and reporting provisions in §§ 63.2445 through 63.2550, the owner or operator of an offsite cleaning or reloading facility may comply as specified in § 63.2535(a)(2) with any other subpart of this part 63 which has monitoring, recordkeeping, and reporting provisions as specified in § 63.2535(a)(2).

(3) You may elect to set a pressure relief device to a value less than the 2.5 psig required in § 63.1253(f)(5) if you provide rationale in your notification of compliance status report explaining why the alternative value is sufficient to prevent breathing losses at all times.

(4) You may comply with the vapor balancing alternative in § 63.1253(f) when your storage tank is filled from a barge. All requirements for tank trucks and railcars specified in § 63.1253(f) also apply to barges, except as specified in § 63.2470(e)(4)(i).

(i) When § 63.1253(f)(2) refers to pressure testing certifications, the requirements in 40 CFR 61.304(f) apply for barges.

(ii) [Reserved]

(f) **Storage tank degassing.** Beginning no later than the compliance dates specified in § 63.2445(g), for each storage tank subject to item 1 of Table 4 to this subpart, you must comply with paragraphs (f)(1) through (34) of this section during storage tank shutdown operations (*i.e.*, emptying and degassing of a storage tank) until the vapor space concentration in the storage tank is less than 10 percent of the LEL. You must determine the LEL-concentration using process instrumentation or portable measurement devices and follow procedures for calibration and maintenance according to manufacturer's specifications.

(1) Remove liquids from the storage tank as much as practicable.

(2) Comply with one of the following:

(i) Reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare.

(ii) Reduce emissions of total organic HAP by 95 weight-percent by venting emissions through a closed vent system to any combination of non-flare control devices.

(iii) Reduce emissions of total organic HAP by routing emissions to a fuel gas system or process and meet the requirements specified in § 63.982(d) and the applicable requirements in § 63.2450(e)(4).

(3) Maintain records necessary to demonstrate compliance with the requirements in § 63.2450(u) including, if appropriate, records of existing standard site procedures used to empty and degas (deinventory) equipment for safety purposes.

(4) For floating roof storage tanks, the storage tank may be opened to set up equipment (e.g., making connections to a temporary control device) for the shutdown operations but must not be actively degassed during this time period.

**§ 63.2475 What requirements must I meet for transfer racks?**

(a) You must comply with each emission limit and work practice standard in Table 5 to this subpart that applies to your transfer racks, and you must meet each applicable requirement in paragraph (b) of this section.

(b) When the term “high throughput transfer rack” is used in subpart SS of this part 63, the term “Group 1 transfer rack,” as defined in § 63.2550, applies for the purposes of this subpart.

**§ 63.2480 What requirements must I meet for equipment leaks?**

(a) You must meet each requirement in Table 6 to this subpart that applies to your equipment leaks, except as specified in paragraphs (b) through (f) of this section. For each light liquid pump, valve pressure relief device, and connector in ethylene oxide service as defined in § 63.2550(i), you must also meet the applicable requirements specified in §§ 63.2492 and 63.2493(d) and (e).

(b) Except as specified in paragraphs (b)(6) and (7) of this section, if you comply with either subpart H or UU of this part, you may elect to comply with the provisions in paragraphs (b)(1) through (5) of this section as an alternative to the referenced provisions in subpart H or UU of this part.

(1) The requirements for pressure testing in § 63.178(b) or § 63.1036(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with § 63.178(b) or § 63.1036(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under § 63.1022(b)(1) or § 63.181(b)(1)(i).

(4) For connectors in gas/vapor and light liquid service at an existing source, you may elect to comply with the requirements in § 63.169 or § 63.1029 for connectors in heavy liquid service, including all associated recordkeeping and reporting requirements, rather than the requirements of § 63.174 or § 63.1027.

(5) Except as specified in paragraph (b)(6) of this section, for pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 parts per million (ppm) or greater as an alternative to the values specified in § 63.1026(b)(2)(i) through (iii) or § 63.163(b)(2).

(6) Beginning no later than the compliance dates specified in § 63.2445(h), paragraph (b)(5) of this section no longer applies.

(7) For each piece of equipment that is subject to Table 6 to this subpart and is also subject to periodic monitoring with EPA Method 21 of 40 CFR part 60, appendix A-7, and is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, you must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this paragraph (b)(7).

(c) Except as specified in paragraphs (c)(10) and (11) of this section, if you comply with 40 CFR part 65, subpart F, you may elect to comply with the provisions in paragraphs (c)(1)

through (9) of this section as an alternative to the referenced provisions in 40 CFR part 65, subpart F.

(1) The requirements for pressure testing in § 65.117(b) may be applied to all processes, not just batch processes.

(2) For the purposes of this subpart, pressure testing for leaks in accordance with § 65.117(b) is not required after reconfiguration of an equipment train if flexible hose connections are the only disturbed equipment.

(3) For an existing source, you are not required to develop an initial list of identification numbers for connectors as would otherwise be required under § 65.103(b)(1).

(4) You may elect to comply with the monitoring and repair requirements specified in § 65.108(e)(3) as an alternative to the requirements specified in § 65.108(a) through (d) for any connectors at your affected source.

(5) Except as specified in paragraph (c)(10) of this section, for pumps in light liquid service in an MCPU that has no continuous process vents and is part of an existing source, you may elect to consider the leak definition that defines a leak to be 10,000 ppm or greater as an alternative to the values specified in § 65.107(b)(2)(i) through (iii) of this chapter.

(6) When 40 CFR part 65, subpart F refers to the implementation date specified in § 65.1(f), it means the compliance date specified in § 63.2445.

(7) When §§ 65.105(f) and 65.117(d)(3) refer to § 65.4, it means § 63.2525.

(8) When § 65.120(a) refers to § 65.5(d), it means § 63.2515.

(9) When § 65.120(b) refers to § 65.5(e), it means § 63.2520.

(10) Beginning no later than the compliance dates specified in § 63.2445(h), paragraph (c)(5) of this section no longer applies.

(11) For each piece of equipment that is subject to Table 6 to this subpart and is also subject to periodic monitoring with EPA Method 21 of 40 CFR part 60, appendix A-7, and is added to an affected source after December 17, 2019, or replaces equipment at an affected source after December 17, 2019, you must initially monitor for leaks within 30 days after August 12, 2020, or initial startup of the equipment, whichever is later. Equipment that is designated as unsafe- or difficult-to-monitor is not subject to this paragraph (c)(11).

(d) The provisions of this section do not apply to bench-scale processes, regardless of whether the processes are located at the same plant site as a process subject to the provisions of this subpart.

(e) Beginning no later than the compliance dates specified in § 63.2445(g), except as specified in paragraph (e)(4) of this section, you must comply with the requirements specified in paragraphs (e)(1) and (2) of this section for pressure relief devices, such as relief valves or rupture disks, in organic HAP gas or vapor service instead of the pressure relief device requirements of § 63.1030 of subpart UU, § 63.165 of subpart H, or § 65.111 of this chapter. Except as specified in paragraphs (e)(4) and (5) of this section, you must also comply with the requirements specified in paragraphs (e)(3), (6), (7), and (8) of this section for all pressure relief devices in organic HAP service.

(1) ***Operating requirements.*** Except during a pressure release, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of less than 500 ppm above background as measured by the method in § 63.1023(b) of subpart UU, § 63.180(c) of subpart H, or § 65.104(b) of this chapter.

(2) **Pressure release requirements.** For pressure relief devices in organic HAP gas or vapor service, you must comply with the applicable requirements paragraphs (e)(2)(i) through (iii) of this section following a pressure release.

(i) If the pressure relief device does not consist of or include a rupture disk, conduct instrument monitoring, as specified in § 63.1023(b) of subpart UU, § 63.180(c) of subpart H, or § 65.104(b) of this chapter, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.

(ii) If the pressure relief device includes a rupture disk, either comply with the requirements in paragraph (e)(2)(i) of this section (and do not replace the rupture disk) or install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. ~~You must conduct instrument monitoring, as specified in § 63.1023(b) of subpart UU, § 63.180(c) of subpart H, or § 65.104(b) of this chapter, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.~~

(iii) If the pressure relief device consists only of a rupture disk, install a replacement disk as soon as practicable after a pressure release, but no later than 5 calendar days after the pressure release. You must not initiate startup of the equipment served by the rupture disk until the rupture disc is replaced. ~~You must conduct instrument monitoring, as specified in § 63.1023(b) of subpart UU, § 63.180(c) of subpart H, or § 65.104(b) of this chapter, no later than 5 calendar days after the pressure relief device returns to organic HAP gas or vapor service following a~~

~~pressure release to verify that the pressure relief device is operating with an instrument reading of less than 500 ppm.~~

(3) ***Pressure release management.*** Except as specified in paragraphs (e)(4) and (5) of this section, you must comply with the requirements specified in paragraphs (e)(3)(i) through (v) of this section for all pressure relief devices in organic HAP service.

(i) You must equip each affected pressure relief device with a device(s) or use a monitoring system that is capable of:

(A) Identifying the pressure release;

(B) Recording the time and duration of each pressure release; and

(C) Notifying operators immediately that a pressure release is occurring. The device or monitoring system must be either specific to the pressure relief device itself or must be associated with the process system or piping, sufficient to indicate a pressure release to the atmosphere. Examples of these types of devices and systems include, but are not limited to, a rupture disk indicator, magnetic sensor, motion detector on the pressure relief valve stem, flow monitor, or pressure monitor.

(ii) You must apply at least three redundant prevention measures to each affected pressure relief device and document these measures. Examples of prevention measures include:

(A) Flow, temperature, liquid level and pressure indicators with dead-man switches, monitors, or automatic actuators. Independent, non-duplicative systems within this category count as separate redundant prevention measures.

(B) Documented routine inspection and maintenance programs and/or operator training (maintenance programs and operator training may count as only one redundant prevention measure).

(C) Inherently safer designs or safety instrumentation systems.

(D) Deluge systems.

(E) Staged relief system where the initial pressure relief device (with lower set release pressure) discharges to a flare or other closed vent system and control device.

(iii) If any affected pressure relief device releases to atmosphere as a result of a pressure release event, you must perform root cause analysis and corrective action analysis according to the requirement in paragraph (e)(6) of this section and implement corrective actions according to the requirements in paragraph (e)(7) of this section. You must also calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in § 63.2520(e)(15). Calculations may be based on data from the pressure relief device monitoring alone or in combination with process parameter monitoring data and process knowledge.

(iv) You must determine the total number of release events that occurred during the calendar year for each affected pressure relief device separately. Prior to [INSERT date 60 days after date of publication of final rule in the Federal Register], you must also determine the total number of release events for each pressure relief device for which the root cause analysis concluded that the root cause was a *force majeure* event, as defined in § 63.2550.

(v) Except for pressure relief devices described in paragraphs (e)(4) and (5) of this section, the following release events from an affected pressure relief device are a deviation of the pressure release management work practice standards.

(A) Any release event for which the root cause of the event was determined to be operator error or poor maintenance.

(B) Prior to [INSERT date 60 days after date of publication of final rule in the Federal Register], a second release event not including force majeure events from a single pressure

relief device in a 3 calendar year period for the same root cause for the same equipment. On and after [INSERT date 60 days after date of publication of final rule in the Federal Register], a second release event from a single pressure relief device in a 3 calendar year period for the same root cause for the same equipment.

(C) Prior to [INSERT date 60 days after date of publication of final rule in the Federal Register], aA third release event not including force majeure events from a single pressure relief device in a 3 calendar year period for any reason. On and after [INSERT date 60 days after date of publication of final rule in the Federal Register], a third release event from a single pressure relief device in a 3 calendar year period for any reason.

**(4) *Pressure relief devices routed to a control device, process, fuel gas system, or drain system.***

(i) If all releases and potential leaks from a pressure relief device are routed through a closed vent system to a control device, back into the process, to the fuel gas system, or to a drain system, then you are not required to comply with paragraph (e)(1), (2), or (3) of this section.

(ii) Before the compliance dates specified in § 63.2445(g), both the closed vent system and control device (if applicable) referenced in paragraph (e)(4)(i) of this section must meet the applicable requirements specified in § 63.982(b) and (c)(2) of subpart SS. Beginning no later than the compliance dates specified in § 63.2445(g), both the closed vent system and control device (if applicable) referenced in paragraph (e)(4)(i) of this section must meet the applicable requirements specified in §§ 63.982(c)(2), 63.983, and 63.2450(e)(4) through (6).

(iii) The drain system (if applicable) referenced in paragraph (e)(4)(i) must meet the applicable requirements specified in § 63.2485(e).

**(5) *Pressure relief devices exempted from pressure release management requirements.***

The following types of pressure relief devices are not subject to the pressure release management requirements in paragraph (e)(3) of this section.

(i) Pressure relief devices in heavy liquid service, as defined in § 63.1020 of subpart UU or § 65.103(f) of this chapter.

(ii) Thermal expansion relief valves.

(iii) Pressure relief devices on mobile equipment.

(iv) Pilot-operated pressure relief devices where the primary release valve is routed through a closed vent system to a control device or back into the process, to the fuel gas system, or to a drain system.

(v) Balanced bellows pressure relief devices where the primary release valve is routed through a closed vent system to a control device or back into the process, to the fuel gas system, or to a drain system.

**(6) *Root cause analysis and corrective action analysis.*** A root cause analysis and corrective action analysis must be completed as soon as possible, but no later than 45 days after a release event. Special circumstances affecting the number of root cause analyses and/or corrective action analyses are provided in paragraphs (e)(6)(i) through (iii) of this section.

(i) You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices installed on the same equipment to release.

(ii) Prior to [INSERT date 60 days after date of publication of final rule in the Federal Register], ~~y~~You may conduct a single root cause analysis and corrective action analysis for a single emergency event that causes two or more pressure relief devices to release, regardless of

the equipment served, if the root cause is reasonably expected to be a *force majeure* event, as defined in § 63.2550.

(iii) Except as provided in paragraphs (e)(6)(i) and (ii) of this section, if more than one pressure relief device has a release during the same time period, an initial root cause analysis must be conducted separately for each pressure relief device that had a release. If the initial root cause analysis indicates that the release events have the same root cause(s), the initially separate root cause analyses may be recorded as a single root cause analysis and a single corrective action analysis may be conducted.

(7) ***Corrective action implementation.*** You must conduct a root cause analysis and corrective action analysis as specified in paragraphs (e)(3)(iii) and (e)(6) of this section, and you must implement the corrective action(s) identified in the corrective action analysis in accordance with the applicable requirements in paragraphs (e)(7)(i) through (iii) of this section.

(i) All corrective action(s) must be implemented within 45 days of the event for which the root cause and corrective action analyses were required or as soon thereafter as practicable. If you conclude that no corrective action should be implemented, you must record and explain the basis for that conclusion no later than 45 days following the event.

(ii) For corrective actions that cannot be fully implemented within 45 days following the event for which the root cause and corrective action analyses were required, you must develop an implementation schedule to complete the corrective action(s) as soon as practicable.

(iii) No later than 45 days following the event for which a root cause and corrective action analyses were required, you must record the corrective action(s) completed to date, and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(8) ***Flowing pilot-operated pressure relief devices.*** For affected sources that commenced construction or reconstruction on or before December 17, 2019, you are prohibited from installing a flowing pilot-operated pressure relief device or replacing any pressure relief device with a flowing pilot-operated pressure relief device after August 12, 2023. For affected sources that commenced construction or reconstruction after December 17, 2019, you are prohibited from installing and operating flowing pilot-operated pressure relief devices. For purpose of compliance with this paragraph (e)(8), a flowing pilot-operated pressure relief device means the type of pilot-operated pressure relief device where the pilot discharge vent continuously releases emissions to the atmosphere when the pressure relief device is actuated.

(f) Beginning no later than the compliance dates specified in § 63.2445(g), the referenced provisions specified in paragraphs (f)(1) through (18) of this section do not apply when demonstrating compliance with this section.

(1) Section 63.163(c)(3) of subpart H.

(2) Section 63.172(j)(3) of subpart H.

(3) The second sentence of § 63.181(d)(5)(i) of subpart H.

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

(5) Section 63.1026(b)(3) of subpart UU.

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

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

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

(9) The second sentence of § 65.105(f)(4)(i) of this chapter.

(10) Section 65.107(b)(3) of this chapter.

(11) The phrase “(except periods of start-up, shutdown, or malfunction)” from § 65.107(e)(1)(ii)(A) of this chapter.

(12) The phrase “(except during periods of start-up, shutdown, or malfunction)” from § 65.109(e)(1)(i)(A) of this chapter.

(13) The phrase “(except during periods of start-up, shutdown, or malfunction)” from § 65.112(b)(1) of this chapter.

(14) The last sentence of § 65.115(b)(1) of this chapter.

(15) The last sentence of § 65.115(b)(2) of this chapter.

(16) The phrase “Except for pressure relief devices needed for safety purposes, low leg drains, high point bleeds, analyzer vents, and open-ended valves or lines” in § 65.143(a)(3) of this chapter.

(17) For flares complying with § 63.2450(e)(5), the following provisions do not apply:

(i) Section 63.172(d) of subpart H;

(ii) Section 63.180(e) of subpart H;

(iii) Section 63.181(g)(1)(iii) of subpart H;

(iv) The phrase “including periods when a flare pilot light system does not have a flame” from § 63.181(g)(2)(i) of subpart H;

(v) Section 63.1034(b)(2)(iii) of subpart UU; and

(vi) Section 65.115(b)(2) of this chapter.

(18) For pressure relief devices complying with § 63.2480(e), the following provisions are modified as follows:

(i) In the introductory text of § 63.180(c), replace the reference to § 63.165(a) with § 63.2480(e)(1).

(ii) In § 63.181(b)(2)(i), replace the reference to § 63.165(c) with § 63.2480(e)(4).

(iii) In § 63.181(b)(~~2~~)(3)(i), replace the reference to § 63.165(a) with § 63.2480(e)(1).

(iv) In § 63.181(b)(3)(ii), replace the reference to § 63.165(d) with § 63.2480(e)(2)(ii) and (iii).

(v) In § 63.181(f), replace the reference to § 63.165(a) and (b) with § 63.2480(e)(1) and (2).

(vi) The information in § 63.165(a) required to be reported under § 63.182(d)(2)(xiv) is now required to be reported under § 63.2520(e)(15)(i) through (iii).

(vii) The reference to § 63.1030(b) in § 63.1021(a) no longer applies.

(viii) In § 63.1022(b)(2), replace the reference to § 63.1030(d) with § 63.2480(e)(4).

(ix) In § 63.1022(b)(3), replace the reference to § 63.1030(e) with § 63.2480(e)(2)(ii).

(x) The reference to § 63.1030(c) in § 63.~~1022~~1023(a)(1)(v) no longer applies. Instead comply with the § 63.2480(e)(1) and (2).

(xi) In § 63.1023(c) introductory text and (c)(4), replace the reference to § 63.1030(b) with § 63.2480(e)(1).

(xii) In § 63.1038(c) replace the reference to § 63.1030(c)(3) with § 63.2480(e)(2).

(xiii) The information in § 63.1030(b) required to be reported under § 63.1039(b)(4) is now required to be reported under § 63.2520(e)(15)(i) and (ii).

(xiv) The reference to § 65.111(b) of this chapter in § 65.102(a) of this chapter no longer applies.

(xv) In § 65.103(b)(3) of this chapter, replace the reference to § 65.111(d) with § 63.2480(e)(4).

(xvi) In § 65.103(b)(4) of this chapter, replace the reference to § 63.111(e) with § 63.2480(e)(2)(ii).

(xvii) The reference to § 65.111(b) and (c) of this chapter in § 65.104(a)(1)(iv) of this chapter no longer applies. Instead comply with § 63.2480(e)(1) and (2).

(xviii) In § 65.104(c) introductory text and (c)(4) of this chapter, replace the reference to § 63.111(b) with § 63.2480(e)(1).

(xix) In § 65.119(c)(5) of this chapter, replace the reference to § 65.111(c)(3) with § 63.2480(e)(2) and replace the reference to § 65.111(e) with § 63.2480(e)(2)(ii) and (iii).

(xx) The information required to be reported under § 65.120(b)(4) of this chapter is now required to be reported under § 63.2520(e)(15)(i) and (ii).

**§ 63.2485 What requirements must I meet for wastewater streams and liquid streams in open systems within an MCPU?**

(a) **General.** You must meet each requirement in Table 7 to this subpart that applies to your wastewater streams and liquid streams in open systems within an MCPU, except as specified in paragraphs (b) through (q) of this section.

(b) **Wastewater HAP.** Where § 63.105 and §§ 63.132 through 63.148 refer to compounds in table 9 of subpart G of this part 63, the compounds in tables 8 and 9 to this subpart apply for the purposes of this subpart.

(c) **Group 1 wastewater.** Section 63.132(c)(1) (i) and (ii) do not apply. For the purposes of this subpart, a process wastewater stream is Group 1 for compounds in tables 8 and 9 to this subpart if any of the conditions specified in paragraphs (c) (1) through (3) of this section are met.

(1) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 10,000 ppmw at any flowrate, and the total annual load of compounds in table 8 to this subpart is greater than or equal to 200 lb/yr.

(2) The total annual average concentration of compounds in table 8 to this subpart is greater than or equal to 1,000 ppmw, and the annual average flowrate is greater than or equal to 1 l/min.

(3) The combined total annual average concentration of compounds in tables 8 and 9 to this subpart is greater than or equal to 30,000 ppmw, and the combined total annual load of compounds in tables 8 and 9 to this subpart is greater than or equal to 1 tpy.

(d) **Wastewater tank requirements.**

(1) When §§ 63.133 and 63.147 reference floating roof requirements in §§ 63.119 and 63.120, the corresponding requirements in subpart WW of this part 63 may be applied for the purposes of this subpart.

(2) When § 63.133(a) refers to table 10 of subpart G of this part 63, the maximum true vapor pressure in the table shall be limited to the HAP listed in tables 8 and 9 of this subpart FFFF.

(3) For the purposes of this subpart, the requirements of § 63.133(a)(2) are satisfied by operating and maintaining a fixed roof if you demonstrate that the total soluble and partially soluble HAP emissions from the wastewater tank are no more than 5 percent higher than the

emissions would be if the contents of the wastewater tank were not heated, treated by an exothermic reaction, or sparged.

(4) The emission limits specified in §§ 63.133(b)(2) and 63.139 for control devices used to control emissions from wastewater tanks do not apply during periods of planned routine maintenance of the control device(s) of no more than 240 hr/yr. You may request an extension to a total of 360 hr/yr in accordance with the procedures specified in § 63.2470(d).

(e) **Individual drain systems.** The provisions of § 63.136(e)(3) apply except as specified in paragraph (e)(1) of this section.

(1) A sewer line connected to drains that are in compliance with § 63.136(e)(1) may be vented to the atmosphere, provided that the sewer line entrance to the first downstream junction box is water sealed and the sewer line vent pipe is designed as specified in § 63.136(e)(2)(ii)(A).

(2) [Reserved]

(f) **Closed-vent system requirements.** Except as specified in § 63.2450(e)(6), when § 63.148(k) refers to closed vent systems that are subject to the requirements of § 63.172, the requirements of either § 63.172 or § 63.1034 apply for the purposes of this subpart.

(g) **Halogenated vent stream requirements.** For each halogenated vent stream from a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream that is vented through a closed-vent system to a combustion device to reduce organic HAP emissions, you must meet the same emission limits as specified for batch process vents in item 2 of table 2 to this subpart.

(h) **Alternative test methods.**

(1) As an alternative to the test methods specified in § 63.144(b)(5)(i), you may use Method 8260 or 8270 as specified in § 63.1257(b)(10)(iii).

(2) As an alternative to using the methods specified in § 63.144(b)(5)(i), you may conduct wastewater analyses using Method 1666 or 1671 of 40 CFR part 136 and comply with the sampling protocol requirements specified in § 63.144(b)(5)(ii). The validation requirements specified in § 63.144(b)(5)(iii) do not apply if you use Method 1666 or 1671 of 40 CFR part 136.

(3) As an alternative to using Method 18 of 40 CFR part 60, as specified in §§ 63.139(c)(1)(ii) and 63.145(i)(2), you may elect to use Method 25A of 40 CFR part 60 as specified in § 63.997.

(4) As an alternative to using EPA Method 624 of 40 CFR part 136, appendix A, as specified in § 63.144(b)(5)(i)(C), you may use ASTM D5790-95 (Reapproved 2012) (incorporated by reference, see § 63.14) for the analysis of total organic HAP in wastewater samples. If you choose to use ASTM D5790-95 (Reapproved 2012), then you must also use the sampling procedures of EPA Method 25D 40 CFR part 60, appendix A-7, or an equivalent method.

**(i) *Offsite management and treatment option.***

(1) If you ship wastewater to an offsite treatment facility that meets the requirements of § 63.138(h), you may elect to document in your notification of compliance status report that the wastewater will be treated as hazardous waste at a facility that meets the requirements of § 63.138(h) as an alternative to having the offsite facility submit the certification specified in § 63.132(g)(2).

(2) As an alternative to the management and treatment options specified in § 63.132(g)(2), any affected wastewater stream (or residual removed from an affected wastewater stream) with a total annual average concentration of compounds in Table 8 to this subpart less

than 50 ppmw may be transferred offsite in accordance with paragraphs (i)(2) (i) and (ii) of this section.

(i) The transferee (or you) must demonstrate that less than 5 percent of the HAP in Table 9 to this subpart is emitted from the waste management units up to the activated sludge unit.

(ii) The transferee must treat the wastewater stream or residual in a biological treatment unit in accordance with the requirement in paragraph (i)(2)(iii) of this section and the requirements of §§ 63.138 and 63.145 and the requirements referenced therein.

(iii) Beginning no later than the compliance dates specified in § 63.2445(g), the requirement of § 63.145(a)(3) no longer applies. Instead, the transferee must comply with the conditions specified in § 63.2450(g)(6).

(j) You must determine the annual average concentration and annual average flowrate for wastewater streams for each MCPU. The procedures for flexible operation units specified in § 63.144 (b) and (c) do not apply for the purposes of this subpart.

(k) ***Outlet concentration correction for supplemental gases.*** The requirement to correct outlet concentrations from combustion devices to 3-percent oxygen in §§ 63.139(c)(1)(ii) and 63.145(i)(6) applies only if supplemental gases are combined with a vent stream from a Group 1 wastewater stream. If emissions are controlled with a vapor recovery system as specified in § 63.139(c)(2), you must correct for supplemental gases as specified in § 63.2460(c)(6).

(l) ***Requirements for liquid streams in open systems.***

(1) References in § 63.149 to § 63.100(b) mean § 63.2435(b) for the purposes of this subpart.

(2) When § 63.149(e) refers to 40 CFR 63.100(l) (1) or (2), § 63.2445(a) applies for the purposes of this subpart.

(3) When § 63.149 uses the term “chemical manufacturing process unit,” the term “MCPU” applies for the purposes of this subpart.

(4) When § 63.149(e)(1) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraphs (c) (1) through (3) of this section apply for the purposes of this subpart.

(5) When § 63.149(e)(2) refers to characteristics of water that contain compounds in Table 9 to 40 CFR part 63, subpart G, the characteristics specified in paragraph (c)(2) of this section apply for the purposes of this subpart.

(m) When § 63.132(f) refers to “a concentration of greater than 10,000 ppmw of table 9 compounds,” the phrase “a concentration of greater than 30,000 ppmw of total partially soluble HAP (PSHAP) and soluble HAP (SHAP) or greater than 10,000 ppmw of PSHAP” shall apply for the purposes of this subpart.

(n) ***Alternative requirements for wastewater that is Group 1 for soluble HAP only.*** The option specified in this paragraph (n) applies to wastewater that is Group 1 for soluble HAP in accordance with paragraph (c)(3) of this section and is discharged to biological treatment. Except as provided in paragraph (n)(4) of this section, this option does not apply to wastewater that is Group 1 for partially soluble HAP in accordance with paragraph (c)(1), (c)(2), or (c)(4) of this section. For wastewater that is Group 1 for SHAP, you need not comply with §§ 63.133 through 63.137 for any equalization unit, neutralization unit, and/or clarifier prior to the activated sludge unit, and you need not comply with the venting requirements in § 63.136(e)(2)(ii)(A) for lift stations with a volume larger than 10,000 gal, provided you comply with the requirements specified in paragraphs (n)(1) through (3) of this section and all otherwise applicable requirements specified in table 7 to this subpart. For this option, the treatment requirements in §

63.138 and the performance testing requirements in § 63.145 do not apply to the biological treatment unit, except as specified in paragraphs (n)(2)(i) through (iv) of this section.

(1) Wastewater must be hard-piped between the equalization unit, clarifier, and activated sludge unit. This requirement does not apply to the transfer between any of these types of units that are part of the same structure and one unit overflows into the next.

(2) Calculate the destruction efficiency of the biological treatment unit using Equation 1 to this paragraph (n)(2) in accordance with the procedures described in paragraphs (n)(2)(i) through (viii) of this section. You have demonstrated initial compliance if E is greater than or equal to 90 percent.

$$E = \frac{(QMW_a - QMG_e - QMG_n - QMG_c)(F_{bio})}{QMW_a} \times 100 \quad (\text{Eq. 1})$$

Where:

E = destruction efficiency of total PSHAP and SHAP for the biological treatment unit including the equalization unit, neutralization unit, and/or clarifier, percent;

$QMW_a$  = mass flow rate of total PSHAP and SHAP compounds entering the equalization unit (or whichever of the three types of units is first), kilograms per hour (kg/hr);

$QMG_e$  = mass flow rate of total PSHAP and SHAP compounds emitted from the equalization unit, kg/hr;

$QMG_n$  = mass flow rate of total PSHAP and SHAP compounds emitted from the neutralization unit, kg/hr;

$QMG_c$  = mass flow rate of total PSHAP and SHAP compounds emitted from the clarifier, kg/hr

$F_{bio}$  = site-specific fraction of PSHAP and SHAP compounds biodegraded in the biological treatment unit.

(i) Include all PSHAP and SHAP compounds in both Group 1 and Group 2 wastewater streams from all MCPU, except you may exclude any compounds that meet the criteria specified in § 63.145(a)(6)(ii) or (iii).

(ii) Except as specified in paragraph (n)(2)(vii) of this section, conduct the demonstration under representative process unit and treatment unit operating conditions in accordance with § 63.145(a)(3) and (4).

(iii) Determine PSHAP and SHAP concentrations and the total wastewater flow rate at the inlet to the equalization unit in accordance with § 63.145(f)(1) and (2). References in § 63.145(f)(1) and (2) to required mass removal and actual mass removal do not apply for the purposes of this section.

(iv) Determine  $F_{bio}$  for the activated sludge unit as specified in § 63.145(h), except as specified in paragraph (n)(2)(iv)(A) or paragraph (n)(2)(iv)(B) of this section.

(A) If the biological treatment process meets both of the requirements specified in § 63.145(h)(1)(i) and (ii), you may elect to replace the  $F_{bio}$  term in Equation 1 to paragraph (n)(2) of this section with the numeral “1.”

(B) You may elect to assume  $f_{bio}$  is zero for any compounds on List 2 of table 36 in subpart G.

(v) Determine  $QMG_e$ ,  $QMG_n$ , and  $QMG_c$  using EPA's WATER9 model or the most recent update to this model, and conduct testing or use other procedures to validate the modeling results.

(vi) Submit the data and results of your demonstration, including both a description of and the results of your WATER9 modeling validation procedures, in your notification of compliance status report as specified in § 63.2520(d)(2)(ii).

(vii) Beginning no later than the compliance dates specified in § 63.2445(g), the requirement of § 63.145(a)(3) no longer applies. Instead, you must comply with the conditions specified in § 63.2450(g)(6).

(3) As an alternative to the venting requirements in § 63.136(e)(2)(ii)(A), a lift station with a volume larger than 10,000 gal may have openings necessary for proper venting of the lift station. The size and other design characteristics of these openings may be established based on manufacturer recommendations or engineering judgment for venting under normal operating conditions. You must describe the design of such openings and your supporting calculations and other rationale in your notification of compliance status report.

(4) For any wastewater streams that are Group 1 for both PSHAP and SHAP, you may elect to meet the requirements specified in Table 7 to this subpart for the PSHAP and then comply with paragraphs (n)(1) through (3) of this section for the SHAP in the wastewater system. You may determine the SHAP mass removal rate, in kg/hr, in treatment units that are used to meet the requirements for PSHAP and add this amount to both the numerator and denominator in Equation 1 to paragraph (n)(2) of this section.

(o) **Compliance records.** Except as specified in paragraph (p) of this section, for each CPMS used to monitor a nonflare control device for wastewater emissions, you must keep records as specified in § 63.998(c)(1) in addition to the records required in § 63.147(d).

(p) **Compliance records after date of compliance.** Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (o) of this section no longer applies. Instead, for each CPMS used to monitor a nonflare control device for wastewater emissions, you must keep records as specified in § 63.998(c)(1) in addition to the records required in § 63.147(d), except that the provisions of § 63.998(c)(1)(ii)(D), (E), (F), and (G) do not apply.

(q) **Startup, shutdown, and malfunction referenced provisions.** Beginning no later than the compliance dates specified in § 63.2445(g), the referenced provisions specified in paragraphs (q)(1) through (5) of this section do not apply when demonstrating compliance with this section.

(1) Section 63.105(d) of subpart F and the phrase “as part of the start-up, shutdown, and malfunction plan required under § 63.6(e)(3) of subpart A of this part” from § 63.105(e) of subpart F.

(2) Section 63.132(b)(3)(i)(B) of subpart G.

(3) The phrase “or startup/shutdown/malfunction” in § 63.132(f)(2) of subpart G.

(4) Section 63.148(f)(3) of subpart G.

(5) For flares complying with § 63.2450(e)(5), the following provisions do not apply:

(i) Section 63.139(c)(3) of subpart G;

(ii) Section 63.139(d)(3) of subpart G;

(iii) Section 63.145(j) of subpart G;

(iv) Section 63.146(b)(7)(i) of subpart G; and

(v) Section 63.147(d)(1) of subpart G.

**§ 63.2490 What requirements must I meet for heat exchange systems?**

(a) You must comply with each requirement in Table 10 to this subpart that applies to your heat exchange systems, except as specified in paragraphs (b) through (de) of this section.

(b) Except as specified in paragraph (d) of this section, if you comply with the requirements of § 63.104 as specified in Table 10 to this subpart, then the phrase “a chemical manufacturing process unit meeting the conditions of § 63.100 (b)(1) through (b)(3) of this subpart” in § 63.104(a) means “an MCPU meeting the conditions of § 63.2435” for the purposes of this subpart.

(c) Except as specified in paragraph (d) of this section, if you comply with the requirements of § 63.104 as specified in Table 10 to this subpart, then the reference to “§ 63.100(c)” in § 63.104(a) does not apply for the purposes of this subpart.

(d) Unless one or more of the conditions specified in § 63.104(a)(1), (2), (5), and (6) or paragraph (e) of this section are met, beginning no later than the compliance dates specified in § 63.2445(g), the requirements of § 63.104 as specified in Table 10 to this subpart and paragraphs (b) and (c) of this section no longer apply. Instead, you must monitor the cooling water for the presence of total strippable hydrocarbons that indicate a leak according to paragraph (d)(1) of this section, and if you detect a leak, then you must repair it according to paragraphs (d)(2) and (3) of this section, unless repair is delayed according to paragraph (d)(4) of this section. At any time before the compliance dates specified in § 63.2445(g), you may choose to comply with the requirements in this paragraph (d) in lieu of the requirements of § 63.104 as specified in Table 10 to this subpart and paragraphs (b) and (c) of this section. The requirements in this paragraph (d) do not apply to heat exchange systems that have a maximum cooling water flow rate of 10 gallons per minute or less.

(1) You must perform monitoring to identify leaks of total strippable hydrocarbons from each heat exchange system subject to the requirements of this subpart according to the procedures in paragraphs (d)(1)(i) through (v) of this section.

(i) **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 (d)(1)(i)(A) or (B) of this section.

(A) Each cooling tower return line or any representative riser within the cooling tower prior to exposure to air for each heat exchange system.

(B) 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).

(ii) **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 (d)(1)(ii)(A) of this section. You may also elect to collect and analyze an additional sample from the location(s) described in paragraph (d)(1)(ii)(B) of this section.

(A) 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). The selected monitoring location may be at a point where discharges from multiple heat exchange systems are combined provided that the combined cooling water flow rate at the monitoring location does not exceed 40,000 gallons per minute.

(B) 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.

(iii) **Monitoring method.** If you comply with the total strippable hydrocarbon concentration leak action level as specified in paragraph (d)(1)(iv) of this section, you must comply with the requirements in paragraph (d)(1)(iii)(A) of this section. If you comply with the total hydrocarbon mass emissions rate leak action level as specified in paragraph (d)(1)(iv) of this section, you must comply with the requirements in paragraphs (d)(1)(iii)(A) and (B) of this section.

(A) You must determine the total strippable hydrocarbon concentration (in parts per million by volume (ppmv) as methane) at each monitoring location using the “Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions

from Water Sources” (incorporated by reference - see § 63.14) using a flame ionization detector (FID) analyzer for on-site determination as described in Section 6.1 of the Modified El Paso Method.

(B) You must convert the total strippable hydrocarbon concentration (in ppmv as methane) to a total hydrocarbon mass emissions rate (as methane) using the calculations in Section 7.0 of “Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources” (incorporated by reference - see § 63.14).

(iv) **Monitoring frequency and leak action level.** For each heat exchange system, you must initially monitor monthly for 6-months beginning upon startup and monitor quarterly thereafter using a leak action level defined as a total strippable hydrocarbon concentration (as methane) in the stripping gas of 6.2 ppmv or, for heat exchange systems with a recirculation rate of 10,000 gallons per minute or less, you may monitor quarterly using a leak action level defined as a total hydrocarbon mass emissions rate from the heat exchange system (as methane) of 0.18 kg/hr. If a leak is detected as specified in paragraph (d)(1)(v) of this section, then you must monitor monthly until the leak has been repaired according to the requirements in paragraph (d)(2) or (3) of this section. Once the leak has been repaired according to the requirements in paragraph (d)(2) or (3) of this section, quarterly monitoring for the heat exchange system may resume. The monitoring frequencies specified in this paragraph (d)(1)(iv) also apply to the inlet water feed line for a once-through heat exchange system, if monitoring of the inlet water feed is elected as provided in paragraph (d)(1)(ii)(B) of this section.

(v) **Leak definition.** A leak is defined as described in paragraph (d)(1)(v)(A) or (B) of this section, as applicable.

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

(B) For all other heat exchange systems, a leak is detected if a measurement value of the sample taken from a location specified in paragraph (d)(1)(i)(A) or (B) or (d)(1)(ii)(A) of this section equals or exceeds the leak action level.

(2) If a leak is detected using the methods described in paragraph (d)(1) of this section, you must repair the leak to reduce the concentration or mass emissions rate to below the applicable leak action level as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraph (d)(4) of this section. Repair must include re-monitoring at the monitoring location where the leak was identified according to the method specified in paragraph (d)(1)(iii) of this section to verify that the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is below the applicable leak action level. Repair may also include performing the additional monitoring in paragraph (d)(3) of this section to verify that the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is below the applicable leak action level. Actions that can be taken to achieve repair include but are not limited to:

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

- (ii) Blocking the leaking tube within the heat exchanger;

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

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

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

(3) If you detect a leak when monitoring a cooling tower return line under paragraph (d)(1)(i)(A) of this section, you may conduct additional monitoring of each heat exchanger or group of heat exchangers associated with the heat exchange system for which the leak was detected, as provided in paragraph (d)(1)(i)(B) of this section. If no leaks are detected when monitoring according to the requirements of paragraph (d)(1)(i)(B) of this section, the heat exchange system is considered to have met the repair requirements through re-monitoring of the heat exchange system, as provided in paragraph (d)(2) of this section.

(4) You may delay repair when one of the conditions in paragraph (d)(4)(i) or (ii) of this section is met and the leak is less than the delay of repair action level specified in paragraph (d)(4)(iii) 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.

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

(ii) If the necessary equipment, parts, or personnel are not available and the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate is initially and

remains less than the delay of repair action level for all monitoring periods during the delay of repair, then you may delay the repair for a maximum of 120 calendar days. You must demonstrate that the necessary equipment, parts, or personnel were not available. If, during subsequent monitoring, the delay of repair action level is exceeded, then you must repair the leak within 30 days of the monitoring event in which the leak was equal to or exceeded the delay of repair action level.

(iii) The delay of repair action level is a total strippable hydrocarbon concentration (as methane) in the stripping gas of 62 ppmv or, for heat exchange systems with a recirculation rate of 10,000 gallons per minute or less, the delay of repair action level is a total hydrocarbon mass emissions rate (as methane) of ~~1.8~~ 1.8 kg/hr. The delay of repair action level is assessed as described in paragraph (d)(4)(iii)(A) or (B) of this section, as applicable.

(A) For once-through heat exchange systems for which the inlet water feed is monitored as described in paragraph (d)(1)(ii)(B) of this section, the delay of repair action level is exceeded if the difference in the measurement value of the sample taken from a location specified in paragraph (d)(1)(ii)(A) of this section and the measurement value of the corresponding sample taken from the location specified in paragraph (d)(1)(ii)(B) of this section equals or exceeds the delay of repair action level.

(B) For all other heat exchange systems, the delay of repair action level is exceeded if a measurement value of the sample taken from a location specified in paragraph (d)(1)(i)(A) or (B) or (d)(1)(ii)(A) of this section equals or exceeds the delay of repair action level.

(e) If 99 percent by weight or more of the organic compounds that could leak into the heat exchange system are water soluble and have a Henry's Law Constant less than 5.0E-6 at 25 degrees Celsius (atmospheres-cubic meters/mol), beginning no later than the compliance dates

specified in § 63.2445(g), you may monitor the cooling water for leaks according to the requirements in § 63.104(b) in lieu of using the Modified El Paso Method. If you detect a leak according to § 63.104(b), then you must repair it according to paragraph (e)(1) of this section, unless repair is delayed according to paragraph (e)(2) of this section.

(1) If a leak is detected using the methods described in paragraph (e) of this section, you must repair the leak as soon as practicable, but no later than 45 days after identifying the leak, except as specified in paragraph (e)(2) of this section. Repair must include re-monitoring at the monitoring location where the leak was identified to verify that the criteria in § 63.104(b)(6) is no longer met. Actions that can be taken to achieve repair include but are not limited to:

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

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

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

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

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

(2) You may delay repair when the conditions in § 63.104(e) are met.

**§ 63.2492 How do I determine whether my process vent, storage tank, or equipment is in ethylene oxide service?**

To determine if process vents, storage tanks, and equipment leaks are in ethylene oxide service as defined in § 63.2550(i), you must comply with the requirements in paragraphs (a) through (c) of this section, as applicable.

(a) For each batch process vent or continuous process vent stream, you must measure the flow rate and concentration of ethylene oxide of each process vent as specified in paragraphs (a)(1) through (5) of this section.

(1) Measurements must be made prior to any dilution of the vent streams.

(2) Measurements may be made on the combined vent streams at an MCPU or for each separate vent stream.

(3) Method 1 or 1A of 40 CFR part 60, appendix A-1, as appropriate, must be used for the selection of the sampling sites. For vents smaller than 0.10 meter in diameter, sample at one point at the center of the duct.

(4) The gas volumetric flow rate must be determined using Method 2, 2A, 2C, 2D, 2F, or 2G of 40 CFR part 60, appendices A-1 and A-2, as appropriate.

(5) The concentration of ethylene oxide must be determined using Method 18 of 40 CFR part 60, appendix A-6, or Method 320 of appendix A to this part.

(b) For storage tanks, you must ~~measure-determine~~ the concentration of ethylene oxide of the fluid stored in the storage tanks by complying with the requirements in paragraph (b)(1) or (b)(2) of this section.

(1) You must measure the concentration of ethylene oxide of the fluid stored in the storage tanks using Method 624.1 of 40 CFR part 136, appendix A, or preparation by Method 5031 and analysis by Method 8260D (both incorporated by reference, see § 63.14) in the SW-846 Compendium. In lieu of preparation by SW-846 Method 5031, you may use SW-846 Method 5030B (incorporated by reference, see § 63.14), as long as: You do not use a preservative in the collected sample; you store the sample with minimal headspace as cold as possible and at least below 4 degrees C; and you analyze the sample as soon as possible, but in

no case longer than 7 days from the time the sample was collected. If you are collecting a sample from a pressure vessel, you must maintain the sample under pressure both during and following sampling.

(2) Unless specified by the Administrator, you may calculate the concentration of ethylene oxide of the fluid stored in the storage tanks if information specific to the fluid stored is available. Information specific to the fluid stored includes concentration data from safety data sheets.

(c) For equipment leaks, you must comply with the requirements in paragraphs (c)(1) through (4) of this section.

(1) Each piece of equipment within an MCPU that can reasonably be expected to contain equipment in ethylene oxide service is presumed to be in ethylene oxide service unless you demonstrate that the piece of equipment is not in ethylene oxide service. For a piece of equipment to be considered not in ethylene oxide service, it must be determined that the percent ethylene oxide content of the process fluid that is contained in or contacts equipment can be reasonably expected to not exceed 0.1 percent by weight on an annual average basis. For purposes of determining the percent ethylene oxide content of the process fluid, you must use Method 18 of 40 CFR part 60, appendix A-6, for gaseous process fluid, and Method 624.1 of 40 CFR part 136, appendix A, or preparation by Method 5031 and analysis by Method 8260D (both incorporated by reference, see § 63.14) in the SW-846 Compendium for liquid process fluid. In lieu of preparation by SW-846 Method 5031, you may use SW-846 Method 5030B (incorporated by reference, see § 63.14), as long as: You do not use a preservative in the collected sample; you store the sample with minimal headspace as cold as possible and at least below 4 degrees C; and

you analyze the sample as soon as possible, but in no case longer than 7 days from the time the sample was collected.

(2) Unless specified by the Administrator, you may use good engineering judgment rather than the procedures specified in paragraph (c)(1) of this section to determine that the percent ethylene oxide content of the process fluid that is contained in or contacts equipment does not exceed 0.1 percent by weight.

(3) You may revise your determination for whether a piece of equipment is in ethylene oxide service by following the procedures in paragraph (c)(1) of this section, or by documenting that a change in the process or raw materials no longer causes the equipment to be in ethylene oxide service.

(4) Samples used in determining the ethylene oxide content must be representative of the process fluid that is contained in or contacts the equipment.

**§ 63.2493 What requirements must I meet for process vents, storage tanks, or equipment that are in ethylene oxide service?**

This section applies beginning no later than the compliance dates specified in § 63.2445(i). In order to demonstrate compliance with the emission limits and work practice standards specified in Tables 1, 2, and 4 to this subpart for process vents and storage tanks in ethylene oxide service, you must meet the requirements specified in paragraphs (a) through (c) of this section. In order to demonstrate compliance with the requirements specified in Table 6 to this subpart for equipment in ethylene oxide service, you must meet the requirements specified in paragraphs (d) and (e) of this section.

(a) **Initial compliance.** For initial compliance, you must comply with paragraphs (a)(1) through (4) of this section, as applicable.

(1) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a flare as specified in Table 1, 2, or 4 to this subpart, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must conduct the initial visible emissions demonstration required by § 63.670(h) of subpart CC as specified in § 63.2450(e)(5).

(2) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a non-flare control device that reduces ethylene oxide by greater than or equal to 99.9 percent by weight as specified in Table 1, 2, or 4 to this subpart, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must comply with paragraphs (a)(2)(i) through (viii) of this section.

(i) Conduct an initial performance test of the control device that is used to comply with the percent reduction requirement at the inlet and outlet of the control device. For purposes of compliance with this paragraph (a)(2), you may not use a design evaluation.

(ii) Conduct the performance test according to the procedures in §§ 63.997 and 63.2450(g). Use Method 18 of 40 CFR part 60, appendix A-6, or Method 320 of appendix A to this part to determine the ethylene oxide concentration. Use Method 1 or 1A of 40 CFR part 60, appendix A-1, to select the sampling sites at each sampling location. Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2. Use Method 4 of 40 CFR part 60, appendix A-3, to convert the volumetric flowrate to a dry basis.

(iii) Calculate the mass emission rate of ethylene oxide entering the control device and exiting the control device using Equations 1 and 2 to this paragraph (a)(2)(iii).

$$E_{\text{EtO,inlet}} = K C_{\text{EtO,inlet}} M_{\text{EtO}} Q_{\text{inlet}} \text{ (Eq. 1)}$$

$$E_{\text{EtO,outlet}} = K C_{\text{EtO,outlet}} M_{\text{EtO}} Q_{\text{outlet}} \text{ (Eq. 2)}$$

Where:

$E_{EtO,inlet}$ ,  $E_{EtO,outlet}$  = Mass rate of ethylene oxide at the inlet and outlet of the control device, respectively, kilogram per hour.

$C_{EtO,inlet}$ ,  $C_{EtO,outlet}$  = Concentration of ethylene oxide in the gas stream at the inlet and outlet of the control device, respectively, dry basis, parts per million by volume.

$M_{EtO}$  = Molecular weight of ethylene oxide, 44.05 grams per gram-mole.

$Q_{inlet}$ ,  $Q_{outlet}$  = Flow rate of the gas stream at the inlet and outlet of the control device, respectively, dry standard cubic meter per minute.

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

(iv) Calculate the percent reduction from the control device using Equation 3 to this paragraph (a)(2)(iv). You have demonstrated initial compliance if the overall reduction of ethylene oxide is greater than or equal to 99.9 percent by weight.

$$\text{Percent reduction} = (E_{EtO,inlet} - E_{EtO,outlet}) / E_{EtO,inlet} * 100 \text{ (Eq. 3)}$$

Where:

$E_{EtO,inlet}$ ,  $E_{EtO,outlet}$  = Mass rate of ethylene oxide at the inlet and outlet of the control device, respectively, kilogram per hour, calculated using Equations 1 and 2 to paragraph (a)(2)(iii) of this section.

(v) If a new control device is installed, then conduct a performance test of the new device following the procedures in paragraphs (a)(2)(i) through (iv) of this section.

(vi) If you vent emissions through a closed-vent system to a scrubber with a reactant tank, then you must establish operating parameter limits by monitoring the operating parameters specified in paragraphs (a)(2)(vi)(A) through (C) of this section during the performance test.

(A) Scrubber liquid-to-gas ratio (L/G), determined from the total scrubber liquid inlet flow rate and the exit gas flow rate. Determine the average L/G during the performance test as the average of the test run averages.

(B) Scrubber liquid pH of the liquid in the reactant tank. The pH may be measured at any point between the discharge from the scrubber column and the inlet to the reactant tank. Determine the average pH during the performance test as the average of the test run averages.

(C) Temperature of the water-scrubber liquid entering the scrubber column. The temperature may be measured at any point after the heat exchanger and prior to entering the top of the scrubber column. Determine the average inlet water-scrubber liquid temperature as the average of the test run averages.

(vii) If you vent emissions through a closed-vent system to a thermal oxidizer, then you must establish operating parameter limits by monitoring the operating parameters specified in paragraphs (a)(2)(vii)(A) and (B) of this section during the performance test.

(A) Combustion chamber temperature. Determine the average combustion chamber temperature during the performance test as the average of the test run averages.

(B) Flue gas flow rate. Determine the average flue gas flow rate during the performance test as the average of the test run averages.

(viii) If you vent emissions through a closed-vent system to a control device other than a flare, scrubber with a reactant tank, or thermal oxidizer, then you must notify the Administrator of the operating parameters that you plan to monitor during the performance test prior to establishing operating parameter limits for the control device.

(3) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a non-flare control device that reduces ethylene oxide to less than 1 ppmv

as specified in Table 1, 2, or 4 to this subpart, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must comply with either paragraph (a)(3)(i) or (ii) of this section.

(i) Install an FTIR CEMS meeting the requirements of Performance Specification 15 of 40 CFR part 60, appendix B, to continuously monitor the ethylene oxide concentration at the exit of the control device. Comply with the requirements specified in § 63.2450(j) for your CEMS.

(ii) If you do not install a CEMS under paragraph (a)(3)(i) of this section, you must comply with paragraphs (a)(3)(ii)(A) through (C) of this section.

(A) Conduct an initial performance test of the control device that is used to comply with the concentration requirement at the outlet of the control device.

(B) Conduct the performance test according to the procedures in §§ 63.997 and 63.2450(g). Use Method 18 of 40 CFR part 60, appendix A-6, or Method 320 of appendix A to this part to determine the ethylene oxide concentration. You have demonstrated initial compliance if the ethylene oxide concentration is less than 1 ppmv.

(C) Comply with the requirements specified in paragraphs (a)(2)(v) through (viii) of this section, as applicable.

(4) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a non-flare control device that reduces ethylene oxide to less than 5 pounds per year for all combined process vents as specified in Table 1 or 2 to this subpart, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must comply with paragraphs (a)(4)(i) through (iv) of this section.

(i) Conduct an initial performance test of the control device that is used to comply with the mass emission limit requirement at the outlet of the control device.

(ii) Conduct the performance test according to the procedures in §§ 63.997 and 63.2450(g). Use Method 18 of 40 CFR part 60, appendix A-6, or Method 320 of appendix A to this part to determine the ethylene oxide concentration. Use Method 1 or 1A of 40 CFR part 60, appendix A-1, to select the sampling site. Determine the gas volumetric flowrate using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A-2. Use Method 4 of 40 CFR part 60, appendix A-3, to convert the volumetric flowrate to a dry basis.

(iii) Calculate the mass emission rate of ethylene oxide exiting the control device using Equation 2 to paragraph (a)(2)(iii) of this section. You have demonstrated initial compliance if the ethylene oxide from all process vents (controlled and uncontrolled) is less than 5 pounds per year when combined.

(iv) Comply with the requirements specified in paragraphs (a)(2)(v) through (viii) of this section, as applicable.

(b) ***Continuous compliance.*** For continuous compliance, you must comply with paragraphs (b)(1) through (6) of this section, as applicable.

(1) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a flare as specified in Table 1, 2, or 4 to this subpart, then you must comply with the requirements in §§ 63.983 and 63.2450(e)(4) through (6).

(2) If you choose to reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a non-flare control device that reduces ethylene oxide to less than 1 ppmv as specified in Table 1, 2, or 4 to this subpart, and you choose to comply with paragraph (a)(3)(i) of this section, then ~~C~~continuously monitor the ethylene oxide concentration at the exit of the control device using an FTIR CEMS meeting the requirements of Performance Specification 15 of 40 CFR part 60, appendix B, and § 63.2450(j). If you use an FTIR CEMS, you do not need to

conduct the performance testing required in paragraph (b)(3) of this section or the operating parameter monitoring required in paragraphs (b)(4) through (6) of this section.

(3) Conduct a performance test no later than 60 months after the previous performance test and reestablish operating parameter limits following the procedures in paragraph (a)(2) through (4) of this section. The Administrator may request a repeat performance test at any time. For purposes of compliance with this paragraph (b)(3), you may not use a design evaluation.

(4) If you vent emissions through a closed-vent system to a scrubber with a reactant tank, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must meet the operating parameter limits specified in paragraphs (b)(4)(i) through (v) of this section.

(i) Minimum scrubber liquid-to-gas ratio (L/G), equal to the average L/G measured during the most recent performance test. Determine total scrubber liquid inlet flow rate with a flow sensor with a minimum accuracy of at least  $\pm 5$  percent over the normal range of flow measured, or 1.9 liters per minute (0.5 gallons per minute), whichever is greater. Determine exit gas flow rate with a flow sensor with a minimum accuracy of at least  $\pm 5$  percent over the normal range of flow measured, or 280 liters per minute (10 cubic feet per minute), whichever is greater. Compliance with the minimum L/G operating limit must be determined continuously on a 1-hour block basis.

(ii) Maximum scrubber liquid pH of the liquid in the reactant tank, equal to the average pH measured during the most recent performance test. Compliance with the pH operating limit must be determined continuously on a 1-hour block basis. Use a pH sensor with a minimum accuracy of  $\pm 0.2$  pH units.

(iii) Pressure drop across the scrubber column, within the pressure drop range specified by the manufacturer or established based on engineering analysis. Compliance with the pressure drop operating limit must be determined continuously on a 1-hour block basis. Use pressure sensors with a minimum accuracy of  $\pm 5$  percent over the normal operating range or 0.12 kilopascals, whichever is greater.

(iv) Maximum temperature of the water-scrubber liquid entering the scrubber column, equal to the average temperature measured during the most recent performance test. Compliance with the inlet water-scrubber liquid temperature operating limit must be determined continuously on a 1-hour block basis. Use a temperature sensor with a minimum accuracy of  $\pm 1$  percent over the normal range of the temperature measured, expressed in degrees Celsius, or 2.8 degrees Celsius, whichever is greater.

(v) Liquid feed pressure to the scrubber column within the feed pressure range specified by the manufacturer or established based on engineering analysis. Compliance with the liquid feed pressure operating limit must be determined continuously on a 1-hour block basis. Use a pressure sensor with a minimum accuracy of  $\pm 5$  percent over the normal operating range or 0.12 kilopascals, whichever is greater.

(5) If you vent emissions through a closed-vent system to a thermal oxidizer, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must meet the operating parameter limits specified in paragraphs (b)(5)(i) and (ii) of this section and the requirements in paragraph (b)(5)(iii) of this section.

(i) Minimum combustion chamber temperature, equal to the average combustion chamber temperature measured during the most recent performance test. Determine combustion chamber temperature with a temperature sensor with a minimum accuracy of at least  $\pm 1$  percent over the

normal range of temperature measured, expressed in degrees Celsius, or 2.8 degrees Celsius, whichever is greater. Compliance with the minimum combustion chamber temperature operating limit must be determined continuously on a 1-hour block basis.

(ii) Maximum flue gas flow rate, equal to the average flue gas flow rate measured during the most recent performance test. Determine flue gas flow rate with a flow sensor with a minimum accuracy of at least  $\pm 5$  percent over the normal range of flow measured, or 280 liters per minute (10 cubic feet per minute), whichever is greater. Compliance with the maximum flue gas flow rate operating limit must be determined continuously on a 1-hour block basis.

(iii) You must maintain the thermal oxidizer in accordance with good combustion practices that ensure proper combustion. Good combustion practices include, but are not limited to, proper burner maintenance, proper burner alignment, proper fuel to air distribution and mixing, routine inspection, and preventative maintenance.

(6) If you vent emissions through a closed-vent system to a control device other than a flare, scrubber with a reactant tank, or thermal oxidizer, then you must comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983, and you must monitor the operating parameters identified in paragraph (a)(2)(viii) of this section and meet the established operating parameter limits to ensure continuous compliance. The frequency of monitoring and averaging time will be determined based upon the information provided to the Administrator.

(c) **Pressure vessels.** If you have a storage tank in ethylene oxide service that is considered a pressure vessel as defined in as defined in § 63.2550(i), then you must operate and maintain the pressure vessel, as specified in paragraphs (c)(1) through (5) of this section.

(1) The pressure vessel must be designed to operate with no detectable emissions at all times.

(2) Monitor each point on the pressure vessel through which ethylene oxide could potentially be emitted by conducting initial and annual performance tests using Method 21 of 40 CFR part 60, appendix A-7.

(3) Each instrument reading greater than 500 ppmv is a deviation.

(4) Estimate the flow rate and total regulated material emissions from the defect. Assume the pressure vessel has been emitting for half of the time since the last performance test, unless other information supports a different assumption.

(5) Whenever ethylene oxide is in the pressure vessel, you must operate the pressure vessel as a closed system that vents through a closed vent system to a control device as specified in paragraphs (c)(5)(i) through (iii) of this section, as applicable.

(i) For closed vent systems, comply with § 63.2450(e)(4) and (6) and the requirements in § 63.983.

(ii) For a non-flare control device, comply with requirements as specified in paragraph (b) of this section.

(iii) For a flare, comply with the requirements of § 63.2450(e)(5).

(d) **Equipment in ethylene oxide service.** Except as specified in paragraphs (d)(1) through (4) and (e) of this section, for equipment in ethylene oxide service as defined in § 63.2550(i), you must comply with the requirements of subpart UU or H of this part, or 40 CFR part 65, subpart F.

(1) For pumps in ethylene oxide service, you must comply with the requirements in paragraphs (d)(1)(i) through (iii) of this section.

(i) The instrument reading that defines a leak for pumps is 1,000 parts per million or greater.

(ii) The monitoring period for pumps is monthly.

(iii) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected. Delay of repair of pumps for which leaks have been detected is allowed for pumps that are isolated from the process and that do not remain in ethylene oxide service.

(2) For connectors in ethylene oxide service, you must comply with the requirements in paragraphs (d)(2)(i) through (iii) of this section.

(i) The instrument reading that defines a leak for connectors is 500 parts per million or greater.

(ii) The monitoring period for connectors is once every 12 months.

(iii) When a leak is detected, it must be repaired as soon as practicable, but not later than 15 calendar days after it is detected. Delay of repair of connectors for which leaks have been detected is allowed for connectors that are isolated from the process and that do not remain in ethylene oxide service.

(3) For each light liquid pump or connector in ethylene oxide service that is added to an ~~affected source~~MCPU, and for each light liquid pump or connector in ethylene oxide service that replaces a light liquid pump or connector in ethylene oxide service, you must initially monitor for leaks within 5 days after initial startup of the equipment.

(4) Pressure relief devices in ethylene oxide service must comply with the requirements in § 63.2480(e) and (f), except as specified in paragraphs (d)(4)(i) through (v) of this section.

(i) The second sentence in § 63.2480(e)(3)(iv) does not apply.

(ii) Section 63.2480(e)(3)(v) does not apply.

(iii) Section 63.2480(e)(6)(ii) does not apply.

(iv) Any release event from an affected pressure relief device is a deviation of the pressure release management work practice standards.

(v) Replace all references to § 63.2445(g) with § 63.2445~~(h)~~(i).

(e) ***Non-applicable referenced provisions.*** The referenced provisions specified in paragraphs (e)(1) through ~~(15)~~(16) of this section do not apply when demonstrating compliance with this section.

(1) Section 63.163(c)(3) of subpart H.

(2) Section 63.163(e) of subpart H.

(3) The second sentence of § 63.181(d)(5)(i) of subpart H.

(4) Section 63.1026(b)(3) of subpart UU.

(5) Section 63.1026(e) of subpart UU.

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

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

(8) The second sentence of § 65.105(f)(4)(i) of this chapter.

(9) Section 65.107(b)(3) of this chapter.

(10) Section 65.107(e) of this chapter.

(11) The phrase “(except during periods of start-up, shutdown, or malfunction)” from § 65.109(e)(1)(i)(A) of this chapter.

(12) The phrase “(except during periods of start-up, shutdown, or malfunction)” from § 65.112(b)(1) of this chapter.

(13) The last sentence of § 65.115(b)(1) of this chapter.

(14) The last sentence of § 65.115(b)(2) of this chapter.

(15) For flares complying with § 63.2450(e)(5), the following provisions do not apply:

(i) Section 63.172(d) of subpart H;

(ii) Section 63.180(e) of subpart H;

(iii) Section 63.181(g)(1)(iii) of subpart H;

(iv) The phrase “including periods when a flare pilot light system does not have a flame” from § 63.181(g)(2)(i) of subpart H;

(v) Section 63.1034(b)(2)(iii) of subpart H; and

(vi) Section 65.115(b)(2) of this chapter.

(16) Requirements for maintenance vents in § 63.2450(v).

#### **Alternative Means of Compliance**

##### **§ 63.2495 How do I comply with the pollution prevention standard?**

(a) You may elect to comply with the pollution prevention alternative requirements specified in paragraphs (a) (1) and (2) of this section in lieu of the emission limitations and work practice standards contained in Tables 1 through 7 to this subpart for any MCPU for which initial startup occurred before April 4, 2002.

(1) You must reduce the production-indexed HAP consumption factor (HAP factor) by at least 65 percent from a 3-year average baseline beginning no earlier than the 1994 through 1996 calendar years. For any reduction in the HAP factor that you achieve by reducing HAP that are also volatile organic compounds (VOC), you must demonstrate an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) on a mass basis. For any reduction in the HAP factor that you achieve by reducing a HAP that is not a VOC, you may not increase the VOC factor.

(2) Any MCPU for which you seek to comply by using the pollution prevention alternative must begin with the same starting material(s) and end with the same product(s). You may not comply by eliminating any steps of a process by transferring the step offsite (to another manufacturing location). You may also not merge a solvent recovery step conducted offsite to onsite and as part of an existing process as a method of reducing consumption.

(3) You may comply with the requirements of paragraph (a)(1) of this section for a series of processes, including situations where multiple processes are merged, if you demonstrate to the satisfaction of the Administrator that the multiple processes were merged after the baseline period into an existing process or processes.

**(b) *Exclusions.***

(1) You must comply with the emission limitations and work practice standards contained in Tables 1 through 7 to this subpart for all HAP that are generated in the MCPU and that are not included in consumption, as defined in § 63.2550. If any vent stream routed to the combustion control is a halogenated vent stream, as defined in § 63.2550, then hydrogen halides that are generated as a result of combustion control must be controlled according to the requirements in § 63.2450(e)(4) and the requirements of § 63.994 and the requirements referenced therein.

(2) You may not merge nondedicated formulation or nondedicated solvent recovery processes with any other processes.

**(c) *Initial compliance procedures.*** To demonstrate initial compliance with paragraph (a) of this section, you must prepare a demonstration summary in accordance with paragraph (c) (1) of this section and calculate baseline and target annual HAP and VOC factors in accordance with paragraphs (c) (2) and (3) of this section.

(1) **Demonstration plan.** You must prepare a pollution prevention demonstration plan that contains, at a minimum, the information in paragraphs (c)(1) (i) through (iii) of this section for each MCPU for which you comply with paragraph (a) of this section.

(i) Descriptions of the methodologies and forms used to measure and record consumption of HAP and VOC compounds.

(ii) Descriptions of the methodologies and forms used to measure and record production of the product(s).

(iii) Supporting documentation for the descriptions provided in accordance with paragraphs (c)(1) (i) and (ii) of this section including, but not limited to, samples of operator log sheets and daily, monthly, and/or annual inventories of materials and products. You must describe how this documentation will be used to calculate the annual factors required in paragraph (d) of this section.

(2) **Baseline factors.** You must calculate baseline HAP and VOC factors by dividing the consumption of total HAP and total VOC by the production rate, per process, for the first 3-year period in which the process was operational, beginning no earlier than the period consisting of the 1994 through 1996 calendar years.

(3) **Target annual factors.** You must calculate target annual HAP and VOC factors. The target annual HAP factor must be equal to 35 percent of the baseline HAP factor. The target annual VOC factor must be lower than the baseline VOC factor by an amount equivalent to the reduction in any HAP that is also a VOC, on a mass basis. The target annual VOC factor may be the same as the baseline VOC factor if the only HAP you reduce is not a VOC.

(d) **Continuous compliance requirements.** You must calculate annual rolling average values of the HAP and VOC factors (annual factors) in accordance with the procedures specified

in paragraphs (d) (1) through (3) of this section. To show continuous compliance, the annual factors must be equal to or less than the target annual factors calculated according to paragraph (c)(3) of this section.

(1) To calculate the annual factors, you must divide the consumption of both total HAP and total VOC by the production rate, per process, for 12-month periods at the frequency specified in either paragraph (d) (2) or (3) of this section, as applicable.

(2) For continuous processes, you must calculate the annual factors every 30 days for the 12-month period preceding the 30th day (*i.e.*, annual rolling average calculated every 30 days). A process with both batch and continuous operations is considered a continuous process for the purposes of this section.

(3) For batch processes, you must calculate the annual factors every 10 batches for the 12-month period preceding the 10th batch (*i.e.*, annual rolling average calculated every 10 batches), except as specified in paragraphs (d)(3) (i) and (ii) of this section.

(i) If you produce more than 10 batches during a month, you must calculate the annual factors at least once during that month.

(ii) If you produce less than 10 batches in a 12-month period, you must calculate the annual factors for the number of batches in the 12-month period since the previous calculations.

(e) **Records.** You must keep records of HAP and VOC consumption, production, and the rolling annual HAP and VOC factors for each MCPU for which you are complying with paragraph (a) of this section.

(f) **Reporting.**

(1) You must include the pollution prevention demonstration plan in the precompliance report required by § 63.2520(c).

(2) You must identify all days when the annual factors were above the target factors in the compliance reports.

**§ 63.2500 How do I comply with emissions averaging?**

(a) For an existing source, you may elect to comply with the percent reduction emission limitations in Tables 1, 2, 4, 5, and 7 to this subpart by complying with the emissions averaging provisions specified in § 63.150, except as specified in paragraphs (b) through (g) of this section.

(b) The batch process vents in an MCPU collectively are considered one individual emission point for the purposes of emissions averaging, except that only individual batch process vents must be excluded to meet the requirements of § 63.150(d)(5).

(c) References in § 63.150 to §§ 63.112 through 63.130 mean the corresponding requirements in §§ 63.2450 through 63.2490, including applicable monitoring, recordkeeping, and reporting.

(d) References to “periodic reports” in § 63.150 mean “compliance report” for the purposes of this subpart.

(e) For batch process vents, estimate uncontrolled emissions for a standard batch using the procedures in § 63.1257(d)(2)(i) and (ii) instead of the procedures in § 63.150(g)(2). Multiply the calculated emissions per batch by the number of batches per month when calculating the monthly emissions for use in calculating debits and credits.

(f) References to “storage vessels” in § 63.150 mean “storage tank” as defined in § 63.2550 for the purposes of this subpart.

(g) Beginning no later than the compliance dates specified in § 63.2445(g), § 63.150(f)(2) does not apply when demonstrating compliance with this section.

**§ 63.2505 How do I comply with the alternative standard?**

As an alternative to complying with the emission limits and work practice standards for process vents and storage tanks in Tables 1 through 4 to this subpart and the requirements in §§ 63.2455 through 63.2470, you may comply with the emission limits in paragraph (a) of this section and demonstrate compliance in accordance with the requirements in paragraph (b) of this section.

**(a) *Emission limits and work practice standards.***

(1) You must route vent streams through a closed-vent system to a control device that reduces HAP emissions as specified in either paragraph (a)(1)(i) or (ii) of this section.

(i) If you use a combustion control device, it must reduce HAP emissions as specified in paragraphs (a)(1)(i)(A), (B), and (C) of this section.

(A) To an outlet TOC concentration of 20 parts per million by volume (ppmv) or less.

(B) To an outlet concentration of hydrogen halide and halogen HAP of 20 ppmv or less.

(C) As an alternative to paragraph (a)(1)(i)(B) of this section, if you control halogenated vent streams emitted from a combustion device followed by a scrubber, reduce the hydrogen halide and halogen HAP generated in the combustion device by greater than or equal to 95 percent by weight in the scrubber.

(ii) If you use a noncombustion control device(s), it must reduce HAP emissions to an outlet total organic HAP concentration of 50 ppmv or less, and an outlet concentration of hydrogen halide and halogen HAP of 50 ppmv or less.

(2) Any Group 1 process vents within a process that are not controlled according to this alternative standard must be controlled according to the emission limits in tables 1 through 3 to this subpart.

(b) **Compliance requirements.** To demonstrate compliance with paragraph (a) of this section, you must meet the requirements of § 63.1258(b)(5) beginning no later than the initial compliance date specified in § 63.2445, except as specified in paragraphs (b)(1) through (9) of this section.

(1) You must comply with the requirements in § 63.2450(e)(4) and (6), and the requirements in § 63.983 and the requirements referenced therein for closed-vent systems, except if you are not reducing organic HAP emissions by venting emissions through a closed-vent system to any combination of control devices, including a flare or recovery device, you are not required to comply with the requirements in § 63.983(b)(1)(i)(A), (b)(1)(ii), (c), (d)(1)(ii), and (d)(2) and (3).

(2) When § 63.1258(b)(5)(i) refers to §§ 63.1253(d) and 63.1254(c), the requirements in paragraph (a) of this section apply for the purposes of this subpart FFFF.

(3) When § 63.1258(b)(5)(i)(B) refers to “HCl,” it means “total hydrogen halide and halogen HAP” for the purposes of this subpart FFFF.

(4) When § 63.1258(b)(5)(ii) refers to § 63.1257(a)(3), it means § 63.2450(j)(5) for the purposes of this subpart FFFF.

(5) You must submit the results of any determination of the target analytes of predominant HAP in the notification of compliance status report.

(6) If you elect to comply with the requirement to reduce hydrogen halide and halogen HAP by greater than or equal to 95 percent by weight in paragraph (a)(1)(i)(C) of this section, you must meet the requirements in paragraphs (b)(6)(i) and (ii) of this section.

(i) Demonstrate initial compliance with the 95-percent reduction by conducting a performance test and setting a site-specific operating limit(s) for the scrubber in accordance with

the requirements in § 63.2450(e)(4) and the requirements of § 63.994 and the requirements referenced therein. You must submit the results of the initial compliance demonstration in the notification of compliance status report. If the performance test report is submitted electronically through the EPA's CEDRI in accordance with § 63.2520(f), the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(ii) Install, operate, and maintain CPMS for the scrubber as specified in §§ 63.994(c) and 63.2450(k), instead of as specified in § 63.1258(b)(5)(i)(C). You must also comply with the requirements in § 63.2450(e)(4), as applicable.

(7) If flow to the scrubber could be intermittent, you must install, calibrate, and operate a flow indicator as specified in § 63.2460(c)(7).

(8) Use the operating day as the averaging period for CEMS data and scrubber parameter monitoring data.

(9) The requirements in paragraph (a) of this section do not apply to emissions from storage tanks during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. You may submit an application to the Administrator requesting an extension of this time limit to a total of 360 hr/yr in accordance with the procedures specified in § 63.2470(d). You must comply with the recordkeeping and reporting specified in §§ 63.998(d)(2)(ii) and 63.999(c)(4) for periods of planned routine maintenance.

## Notification, Reports, and Records

### § 63.2515 What notifications must I submit and when?

(a) **General.** Except as specified in paragraph (d) of this section, you must submit all of the notifications in §§ 63.6(h)(4) and (5), 63.7(b) and (c), 63.8(e) and (f)(4) and (6), and 63.9(b) through (h) of subpart A that apply to you by the dates specified.

(b) **Initial notification.**

(1) As specified in § 63.9(b)(2), if you startup your affected source before November 10, 2003, you must submit an initial notification not later than 120 calendar days after November 10, 2003, or no later than 120 days after the source becomes subject to this subpart, whichever is later.

(2) As specified in § 63.9(b)(3), if you startup your new affected source on or after November 10, 2003, you must submit an initial notification not later than 120 calendar days after you become subject to this subpart.

(c) **Notification of performance test.** If you are required to conduct a performance test, you must submit a notification of intent to conduct a performance test at least 60 calendar days before the performance test is scheduled to begin as required in § 63.7(b)(1). For any performance test required as part of the initial compliance procedures for batch process vents in table 2 to this subpart, you must also submit the test plan required by § 63.7(c) and the emission profile with the notification of the performance test.

(d) **Supplement to Notification of Compliance Status.** You must also submit supplements to the Notification of Compliance Status as specified in § 63.2520(d)(3) through

~~(5)~~(6).

**§ 63.2520 What reports must I submit and when?**

(a) You must submit each report in Table 11 to this subpart that applies to you.

(b) Unless the Administrator has approved a different schedule for submission of reports under § 63.10(a), you must submit each report by the date in table 11 to this subpart and according to paragraphs (b)(1) through (5) of this section.

(1) The first compliance report must cover the period beginning on the compliance date that is specified for your affected source in § 63.2445 and ending on June 30 or December 31, whichever date is the first date following the end of the first 6 months after the compliance date that is specified for your affected source in § 63.2445.

(2) The first compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the first reporting period specified in paragraph (b)(1) of this section.

(3) Each subsequent compliance report must cover the semiannual reporting period from January 1 through June 30 or the semiannual reporting period from July 1 through December 31.

(4) Each subsequent compliance report must be postmarked or delivered no later than August 31 or February 28, whichever date is the first date following the end of the semiannual reporting period.

(5) For each affected source that is subject to permitting regulations pursuant to 40 CFR part 70 or 40 CFR part 71, and if the permitting authority has established dates for submitting semiannual reports pursuant to 40 CFR 70.6(a)(3)(iii)(A) or 40 CFR 71.6(a)(3)(iii)(A), you may submit the first and subsequent compliance reports according to the dates the permitting authority has established instead of according to the dates in paragraphs (b)(1) through (4) of this section.

(c) ***Precompliance report.*** You must submit a precompliance report to request approval for any of the items in paragraphs (c)(1) through (8) of this section. We will either approve or disapprove the report within 90 days after we receive it. If we disapprove the report, you must still be in compliance with the emission limitations and work practice standards in this subpart by the compliance date. To change any of the information submitted in the report, you must notify us 60 days before the planned change is to be implemented.

(1) Requests for approval to set operating limits for parameters other than those specified in §§ 63.2455 through 63.2485 and referenced therein. Alternatively, you may make these requests according to § 63.8(f).

(2) Descriptions of daily or per batch demonstrations to verify that control devices subject to § 63.2450(k)(6) are operating as designed.

(3) A description of the test conditions, data, calculations, and other information used to establish operating limits according to § 63.2460(c)(3).

(4) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions in accordance with § 63.1257(d)(2)(ii). This requirement does not apply to calculations of hydrogen halide and halogen HAP emissions as specified in § 63.2465(b), to determinations that the total HAP concentration is less than 50 ppmv, or if you use previous test data to establish the uncontrolled emissions.

(5) The pollution prevention demonstration plan required in § 63.2495(c)(1), if you are complying with the pollution prevention alternative.

(6) Documentation of the practices that you will implement to minimize HAP emissions from streams that contain energetics and organic peroxides, and rationale for why meeting the

emission limit specified in tables 1 through 7 to this subpart would create an undue safety hazard.

(7) For fabric filters that are monitored with bag leak detectors, an operation and maintenance plan that describes proper operation and maintenance procedures, and a corrective action plan that describes corrective actions to be taken, and the timing of those actions, when the PM concentration exceeds the set point and activates the alarm.

(8) For halogen reduction device other than a scrubber, procedures for establishing monitoring parameters as required by § 63.2450(e)(3)(ii).

(d) ***Notification of compliance status report.*** You must submit a notification of compliance status report according to the schedule in paragraph (d)(1) of this section, and the notification of compliance status report must contain the information specified in paragraphs (d)(2) through ~~(5)~~(6) of this section.

(1) You must submit the notification of compliance status report no later than 150 days after the applicable compliance date specified in § 63.2445.

(2) The notification of compliance status report must include the information in paragraphs (d)(2)(i) through (ix) of this section.

(i) The results of any applicability determinations, emission calculations, or analyses used to identify and quantify HAP usage or HAP emissions from the affected source.

(ii) The results of emissions profiles, performance tests, engineering analyses, design evaluations, flare compliance assessments, inspections and repairs, and calculations used to demonstrate initial compliance according to §§ 63.2455 through 63.2485. For performance tests, results must include descriptions of sampling and analysis procedures and quality assurance procedures. If the performance test report is submitted electronically through the EPA's CEDRI

in accordance with paragraph (f) of this section, the process unit(s) tested, the pollutant(s) tested, and the date that such performance test was conducted may be submitted in the notification of compliance status report in lieu of the performance test results. The performance test results must be submitted to CEDRI by the date the notification of compliance status report is submitted.

(iii) Descriptions of monitoring devices, monitoring frequencies, and the operating limits established during the initial compliance demonstrations, including data and calculations to support the levels you establish.

(iv) All operating scenarios.

(v) Descriptions of worst-case operating and/or testing conditions for control devices.

(vi) Identification of parts of the affected source subject to overlapping requirements described in § 63.2535 and the authority under which you will comply.

(vii) The information specified in § 63.1039(a)(1) through (3) for each process subject to the work practice standards for equipment leaks in Table 6 to this subpart.

(viii) Identify storage tanks for which you are complying with the vapor balancing alternative in § 63.2470(e).

(ix) Records as specified in § 63.2535(l)(1) through (3) of process units used to create a PUG and calculations of the initial primary product of the PUG.

(3) For flares subject to the requirements of § 63.2450(e)(5), you must also submit the information in this paragraph (d)(3) in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for flare monitoring. In lieu of the information required in § 63.987(b) of subpart SS, the supplement to the Notification of Compliance Status must include flare design (*e.g.*, steam-assisted, air-assisted, non-assisted, or pressure-assisted multi-point); all visible emission readings, heat content determinations, flow

rate measurements, and exit velocity determinations made during the initial visible emissions demonstration required by § 63.670(h) of subpart CC, as applicable; and all periods during the compliance determination when the pilot flame or flare flame is absent.

(4) For pressure relief devices subject to the pressure release management work practice standards in § 63.2480(e)(3), you must also submit the information listed in paragraphs (d)(4)(i) and (ii) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date for pressure relief device monitoring.

(i) A description of the monitoring system to be implemented, including the relief devices and process parameters to be monitored, and a description of the alarms or other methods by which operators will be notified of a pressure release.

(ii) A description of the prevention measures to be implemented for each affected pressure relief device.

(5) For process vents, storage tanks, and equipment leaks subject to the requirements of § 63.2493, you must also submit the information in this paragraph (d)(5) in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date. The supplement to the Notification of Compliance Status must identify all process vents, storage tanks, and equipment that are in ethylene oxide service as defined in § 63.2550, the method(s) used to control ethylene oxide emissions from each process vent and storage tank (*i.e.*, use of a flare, scrubber, or other control device), the method(s) used to control ethylene oxide emissions from equipment (*i.e.*, subpart UU or H of this part, or 40 CFR part 65, subpart F), and the information specified in paragraphs (d)(5)(i) through (iii) of this section.

(i) For process vents, include all uncontrolled, undiluted ethylene oxide concentration measurements, and the calculations you used to determine the total uncontrolled ethylene oxide mass emission rate for the sum of all vent gas streams.

(ii) For storage tanks, include the concentration of ethylene oxide of the fluid stored in each storage tank.

(iii) For equipment, include the percent ethylene oxide content of the process fluid and the method used to determine it.

(6) For adsorbers subject to the requirements of § 63.2450(e)(7), you must also submit the information listed in paragraphs (d)(6)(i) and (ii) of this section in a supplement to the Notification of Compliance Status within 150 days after the first applicable compliance date.

(i) Whether the adsorber cannot be regenerated or is a regenerative adsorber(s) that is regenerated off site.

(ii) The breakthrough limit and adsorber bed life established during the initial performance test or design evaluation of the adsorber.

(e) **Compliance report.** The compliance report must contain the information specified in paragraphs (e)(1) through (17) of this section. On and after August 12, 2023 or once the reporting template for this subpart has been available on the CEDRI website for 1 year, whichever date is later, you must submit all subsequent reports ~~to the EPA via the CEDRI~~ as following the procedure specified in § 63.9(k), except any medium submitted through mail must be sent to the attention of the Miscellaneous Organic Chemical Manufacturing Sector Lead, which can be accessed through the EPA's CDX (<https://cdx.epa.gov/>). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using

~~CEDRI cannot later be claimed to be CBI.~~ You must use the appropriate electronic report template on the CEDRI website (<https://www.epa.gov/electronic-reporting-air-emissions/compliance-and-emissions-data-reporting-interface-cedri>) for this subpart. The date report templates become available will be listed on the CEDRI website. Unless the Administrator or delegated state agency or other authority has approved a different schedule for submission of reports under §§ 63.9(i) and 63.10(a) of subpart A, the report must be submitted by the deadline specified in this subpart, regardless of the method in which the report is submitted. ~~Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, submit a complete report, including information claimed to be CBI, to the EPA. The report must be generated using the appropriate form on the CEDRI website or an alternate electronic file consistent with the extensible markup language (XML) schema listed on the CEDRI website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, CORE CBI Office, U.S. EPA Mailroom (C404-02), Attention: Miscellaneous Organic Chemical Manufacturing Sector Lead, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in this paragraph (e). All CBI claims must be asserted at the time of submission. Furthermore under CAA section 114(e) emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available. You may assert a claim of EPA system outage or force majeure for failure to timely comply with the reporting requirement in~~

~~this paragraph (e) provided you meet the requirements outlined in paragraph (i) or (j) of this section, as applicable.~~

(1) Company name and address.

(2) Statement by a responsible official with that official's name, title, and signature, certifying the accuracy of the content of the report. If your report is submitted via CEDRI, the certifier's electronic signature during the submission process replaces the requirement in this ~~paragraph~~ paragraph (e)(2).

(3) Date of report and beginning and ending dates of the reporting period. You are no longer required to provide the date of report when the report is submitted via CEDRI.

(4) For each SSM during which excess emissions occur, the compliance report must include records that the procedures specified in your startup, shutdown, and malfunction plan (SSMP) were followed or documentation of actions taken that are not consistent with the SSMP, and include a brief description of each malfunction. On and after August 12, 2023, this paragraph (e)(4) no longer applies; however, for historical compliance purposes, a copy of the plan must be retained and available on-site for five years after August 12, 2023.

(5) The compliance report must contain the information on deviations, as defined in § 63.2550, according to paragraphs (e)(5)(i), (ii), (iii), and (iv) of this section.

(i) If there are no deviations from any emission limit, operating limit or work practice standard specified in this subpart, include a statement that there were no deviations from the emission limits, operating limits, or work practice standards during the reporting period.

(ii) For each deviation from an emission limit, operating limit, and work practice standard that occurs at an affected source where you are not using a continuous monitoring system (CMS) to comply with the emission limit or work practice standard in this subpart, you must include the

information in paragraphs (e)(5)(ii)(A) through (D) of this section. This includes periods of SSM.

(A) The total operating time in hours of the affected source during the reporting period.

(B) Except as specified in paragraph (e)(5)(ii)(D) of this section, information on the number, duration, and cause of deviations (including unknown cause, if applicable), as applicable, and the corrective action taken.

(C) Operating logs of processes with batch vents from batch operations for the day(s) during which the deviation occurred, except operating logs are not required for deviations of the work practice standards for equipment leaks.

(D) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (e)(5)(ii)(B) of this section no longer applies. Instead, report information for each deviation to meet an applicable standard. For each instance, report the start date, start time, and duration in hours of each deviation. For each deviation, the report must include a list of the affected sources or equipment, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, the cause of the deviation (including unknown cause, if applicable), as applicable, and the corrective action taken.

(iii) For each deviation from an emission limit or operating limit occurring at an affected source where you are using a CMS to comply with an emission limit in this subpart, you must include the information in paragraphs (e)(5)(iii)(A) through (N) of this section. This includes periods of SSM.

(A) The start date, start time, and duration in hours that each CMS was inoperative, except for zero (low-level) and high-level checks.

(B) The start date, start time, and duration in hours that each CEMS was out-of-control and a description of the corrective actions taken.

(C) Except as specified in paragraph (e)(5)(iii)(M) of this section, the date and time that each deviation started and stopped, and whether each deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(D) The total duration in hours of all deviations for each CMS during the reporting period, the total operating time in hours of the affected source during the reporting period, and the total duration as a percent of the total operating time of the affected source during that reporting period.

(E) Except as specified in paragraph (e)(5)(iii)(N) of this section, a breakdown of the total duration of the deviations during the reporting period into those that are due to startup, shutdown, control equipment problems, process problems, other known causes, and other unknown causes.

(F) The total duration in hours of CMS downtime for each CMS during the reporting period, and the total duration of CMS downtime as a percent of the total operating time of the affected source during that reporting period.

(G) An identification of each HAP that is known to be in the emission stream.

(H) A brief description of the process units.

(I) The monitoring equipment manufacturer(s) and model number(s) and the pollutant or parameter monitored.

(J) The date of the latest CMS certification or audit.

(K) Operating logs of processes with batch vents from batch operations for each day(s) during which the deviation occurred.

(L) The operating day or operating block average values of monitored parameters for each day(s) during which the deviation occurred.

(M) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (e)(5)(iii)(C) of this section no longer applies. Instead, report the number of deviation to meet an applicable standard. For each instance, report the start date, start time and duration in hours of each deviation. For each deviation, the report must include a list of the affected sources or equipment, an estimate of the quantity in pounds of each regulated pollutant emitted over any emission limit, a description of the method used to estimate the emissions, and the cause of the deviation (including unknown cause, if applicable), as applicable, and the corrective action taken.

(N) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (e)(5)(iii)(E) of this section no longer applies. Instead, report a breakdown of the total duration in hours of the deviations during the reporting period into those that are due control equipment problems, process problems, other known causes, and other unknown causes.

(iv) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive HAP is the only HAP and usage is less than 10,000 lb/yr, the total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, or total uncontrolled hydrogen halide and halogen HAP emissions from all batch process vents and continuous process vents in a process are less than 1,000 lb/yr, include the records associated with each calculation required by § 63.2525(e) that exceeds an applicable HAP usage or emissions threshold.

(6) If you use a CEMS, and there were no periods during which it was out-of-control as specified in § 63.8(c)(7), include a statement that there were no periods during which the CEMS was out-of-control during the reporting period.

(7) Include each new operating scenario which 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 report the information specified in § 63.2525(b) and provide verification that the operating conditions for any associated control or treatment device have not been exceeded and that any required calculations and engineering analyses have been performed. For the purposes of this paragraph (e)(7), a revised operating scenario for an existing process is considered to be a new operating scenario.

(8) For process units added to a PUG, you must report the description and rationale specified in § 63.2525(i)(4). You must report your primary product redeterminations specified in § 63.2525(i)(5).

(9) Except as specified in §§ 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and paragraph (t) of this section, applicable records and information for periodic reports as specified in referenced subparts F, G, H, SS, UU, WW, and GGG of this part and subpart F of 40 CFR part 65.

(10) Except as specified in paragraph (e)(10)(ii) of this section, whenever you make a process change, or change 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, you must document the change in your compliance report. 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.

(i) The notification must include all of the information in paragraphs (e)(10)(i)(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 under paragraph (d) of this section.

(C) Information required by the notification of compliance status report under paragraph (d) of this section for changes involving the addition of processes or equipment at the affected source.

(ii) You must submit a report 60 days before the scheduled implementation date of any of the changes identified in paragraph (e)(10)(ii)(A), (B), or (C) of this section.

(A) Any change to the information contained in the precompliance report.

(B) A change in the status of a control device from small to large.

(C) A change from Group 2 to Group 1 for any emission point except for batch process vents that meet the conditions specified in § 63.2460(b)(6)(i).

(11) For each flare subject to the requirements in § 63.2450(e)(5), the compliance report must include the items specified in paragraphs (e)(11)(i) through (vi) of this section in lieu of the information required in § 63.999(c)(3) of subpart SS.

(i) Records as specified in § 63.2525(m)(1) for each 15-minute block during which there was at least one minute when regulated material is routed to a flare and no pilot flame or flare flame is present. Include the start and stop time and date of each 15-minute block.

(ii) Visible emission records as specified in § 63.2525(m)(2)(iv) for each period of 2 consecutive hours during which visible emissions exceeded a total of 5 minutes.

(iii) The periods specified in § 63.2525(m)(6). Indicate the date and start and end times for each period, and the net heating value operating parameter(s) determined following the methods in § 63.670(k) through (n) of subpart CC as applicable.

(iv) For flaring events meeting the criteria in §§ 63.670(o)(3) of subpart CC and 63.2450(e)(5)(v):

(A) The start and stop time and date of the flaring event.

(B) The length of time in minutes for which emissions were visible from the flare during the event.

(C) For steam-assisted, air-assisted, and non-assisted flares, the start date, start time, and duration in minutes for periods of time that the flare tip velocity exceeds the maximum flare tip velocity determined using the methods in § 63.670(d)(2) of subpart CC and the maximum 15-minute block average flare tip velocity in ft/sec recorded during the event.

(D) Results of the root cause and corrective actions analysis completed during the reporting period, including the corrective actions implemented during the reporting period and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(v) For pressure-assisted multi-point flares, the periods of time when the pressure monitor(s) on the main flare header show the burners operating outside the range of the manufacturer's specifications. Indicate the date and start and end times for each period.

(vi) For pressure-assisted multi-point flares, the periods of time when the staging valve position indicator monitoring system indicates a stage should not be in operation and is or when

a stage should be in operation and is not. Indicate the date and start and end times for each period.

(12) For bypass lines subject to the requirements § 63.2450(e)(6), the compliance report must include the start date, start time, duration in hours, estimate of the volume of gas in standard cubic feet, the concentration of organic HAP in the gas in parts per million by volume and the resulting mass emissions of organic HAP in pounds that bypass a control device. For periods when the flow indicator is not operating, report the start date, start time, and duration in hours.

(13) For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.2450(e)(7), you must report the date of each instance when breakthrough, as defined in § 63.2550(i), is detected between the first and second adsorber and the adsorber is not replaced according to § 63.2450(e)(7)(iii)(A).

(14) For any maintenance vent release exceeding the applicable limits in § 63.2450(v)(1), the compliance report must include the information specified in paragraphs (e)(14)(i) through (iv) of this section. For the purposes of this reporting requirement, if you comply with § 63.2450(v)(1)(iv) then you must report each venting event conducted under those provisions and include an explanation for each event as to why utilization of this alternative was required.

(i) Identification of the maintenance vent and the equipment served by the maintenance vent.

(ii) The date and time the maintenance vent was opened to the atmosphere.

(iii) The lower explosive limit in percent, vessel pressure in psig, or mass in pounds of VOC in the equipment, as applicable, at the start of atmospheric venting. If the 5 psig vessel pressure option in § 63.2450(v)(1)(ii) was used and active purging was initiated while the ~~lower~~

~~explosive limit concentration of the vapor~~ was 10 percent or greater of its LEL, also include the ~~lower explosive limit~~concentration of the vapors at the time active purging was initiated.

(iv) An estimate of the mass in pounds of organic HAP released during the entire atmospheric venting event.

(15) Compliance reports for pressure relief devices subject to the requirements § 63.2480(e) must include the information specified in paragraphs (e)(15)(i) through (iii) of this section.

(i) For pressure relief devices in organic HAP gas or vapor service, pursuant to § 63.2480(e)(1), report the instrument readings and dates for all readings of 500 ppmv or greater.

(ii) For pressure relief devices in organic HAP gas or vapor service subject to § 63.2480(e)(2), report the instrument readings and dates of instrument monitoring conducted.

(iii) For pressure relief devices in organic HAP service subject to § 63.2480(e)(3), report each pressure release to the atmosphere, including the start date, start time, and duration in minutes of the pressure release and an estimate of the mass quantity in pounds of each organic HAP released; the results of any root cause analysis and corrective action analysis completed during the reporting period, including the corrective actions implemented during the reporting period; and, if applicable, the implementation schedule for planned corrective actions to be implemented subsequent to the reporting period.

(16) For each heat exchange system subject to § 63.2490(d) or (e), beginning no later than the compliance dates specified in § 63.2445(g), the reporting requirements of § 63.104(f)(2) no longer apply; instead, the compliance report must include the information specified in paragraphs (e)(16)(i) through (v) of this section.

(i) The number of heat exchange systems at the plant site subject to the monitoring requirements in § 63.2490(d) or (e) during the reporting period;

(ii) The number of heat exchange systems subject to the monitoring requirements in § 63.2490(d) or (e) at the plant site found to be leaking during the reporting period;

(iii) For each monitoring location where a leak was identified the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate was determined to be equal to or greater than the applicable leak definitions specified in § 63.2490(d)(1)(v) during the reporting period, identification of the monitoring location (*e.g.*, unique monitoring location or heat exchange system ID number), the measured total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate (if complying with § 63.2490(d)) or the measured concentration of the monitored substance(s) (if complying with § 63.2490(e)), the date the leak was first identified, and, if applicable, the date the source of the leak was identified;

(iv) For leaks that were repaired during the reporting period (including delayed repairs), identification of the monitoring location associated with the repaired leak, the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate (if complying with § 63.2490(d)) or the measured concentration of the monitored substance(s) (if complying with § 63.2490(e)) measured during re-monitoring to verify repair, and the re-monitoring date (*i.e.*, the effective date of repair); and

(v) For each delayed repair, identification of the monitoring location associated with the leak for which repair is delayed, the date when the delay of repair began, the date the repair is expected to be completed (if the leak is not repaired during the reporting period), the total strippable hydrocarbon concentration or total hydrocarbon mass emissions rate (if complying with § 63.2490(d)) or the measured concentration of the monitored substance(s) (if complying

with § 63.2490(e)) and date of each monitoring event conducted on the delayed repair during the reporting period, and an estimate in pounds of the potential total hydrocarbon emissions or monitored substance(s) emissions over the reporting period associated with the delayed repair.

(17) For process vents and storage tanks in ethylene oxide service subject to the requirements of § 63.2493, the compliance report must include:

(i) The periods specified in § 63.2525(s)(4). Indicate the date and start and end times for each period.

(ii) If you obtain an instrument reading greater than 500 ppmv of a leak when monitoring a pressure vessel in accordance with § 63.2493(c)(2), submit a copy of the records specified in § 63.2525(s)(5)(ii).

(iii) Reports for equipment subject to the requirements of § 63.2493 as specified in paragraph (e)(9) of this section.

(f) **Performance test reports.** Beginning no later than October 13, 2020, you must submit performance test reports in accordance with this paragraph (f). Unless otherwise specified in this subpart, within 60 days after the date of completing each performance test required by this subpart, you must submit the results of the performance test following the procedures specified in § 63.9(k), paragraphs (f)(1) through (3) of this section.

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

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the EPA's ERT. Alternatively, you may submit an electronic file consistent with the extensible markup language (XML) schema listed on the EPA's ERT website.

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

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~~(3) Confidential business information (CBI). The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later be claimed to be CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, CORE CBI Office, U.S. EPA Mailroom (C404-02), Attention: Group Leader, Measurement Policy Group, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraph (f)(1) and (2) of this section. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c) emissions data is not entitled to confidential treatment, and the EPA is required to make~~

~~emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.~~

**(g) CEMS relative accuracy test audit (RATA) Performance evaluation reports.**

Beginning no later than October 13, 2020, you must start submitting CEMS RATA performance evaluation reports in accordance with this paragraph (g). Unless otherwise specified in this subpart, within 60 days after the date of completing each continuous monitoring system performance evaluation (as defined in § 63.2) ~~that includes a RATA~~, you must submit the results of the performance evaluation following the procedures specified in ~~§ 63.9(k), paragraphs (g)(1) through (3) of this section.~~

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

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

~~(3) Confidential business information (CBI).~~ The EPA will make all the information submitted through CEDRI available to the public without further notice to you. Do not use CEDRI to submit information you claim as CBI. Anything submitted using CEDRI cannot later

be claimed to be CBI. Although we do not expect persons to assert a claim of CBI, if you wish to assert a CBI claim, you must submit a complete file, including information claimed to be CBI, to the EPA. The file must be generated through the use of the EPA's ERT or an alternate electronic file consistent with the XML schema listed on the EPA's ERT website. Submit the file on a compact disc, flash drive, or other commonly used electronic storage medium and clearly mark the medium as CBI. Mail the electronic medium to U.S. Environmental Protection Agency, Office of Air Quality Planning and Standards, Sector Policies and Programs Division, CORE CBI Office, U.S. EPA Mailroom (C404-02), Attention: Group Leader, Measurement Policy Group, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA via the EPA's CDX as described in paragraphs (g)(1) and (2) of this section. All CBI claims must be asserted at the time of submission. Furthermore, under CAA section 114(c) emissions data is not entitled to confidential treatment, and the EPA is required to make emissions data available to the public. Thus, emissions data will not be protected as CBI and will be made publicly available.

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

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

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

~~(3) The outage may be planned or unplanned.~~

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

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

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

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

~~(iii) A description of measures taken or to be taken to minimize the delay in reporting;~~  
~~and~~

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

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

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

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

~~(1) You may submit a claim if a *force majeure* event is about to occur, occurs, or has occurred or there are lingering effects from such an event within the period of time beginning~~

five business days prior to the date the submission is due. For the purposes of this paragraph

(i)(1), a *force majeure* event is defined as an event that will be or has been caused by circumstances beyond the control of the affected facility, its contractors, or any entity controlled by the affected facility that prevents you from complying with the requirement to submit a report electronically within the time period prescribed. Examples of such events are acts of nature (e.g., hurricanes, earthquakes, or floods), acts of war or terrorism, or equipment failure or safety hazard beyond the control of the affected facility (e.g., large scale power outage).

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

(3) You must provide to the Administrator:

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

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

(iii) A description of measures taken or to be taken to minimize the delay in reporting;

and

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

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

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

**§ 63.2525 What records must I keep?**

You must keep the records specified in paragraphs (a) through (t) of this section.

(a) Except as specified in §§ 63.2450(e)(4), 63.2480(f), and 63.2485(p) and (q) and paragraph (t) of this section, each applicable record required by subpart A of this part and in referenced subparts F, G, SS, UU, WW, and GGG of this part and in referenced subpart F of 40 CFR part 65.

(b) Records of each operating scenario as specified in paragraphs (b)(1) through (8) of this section.

(1) A description of the process and the type of process equipment used.

(2) An identification of related process vents, including their associated emissions episodes if not complying with the alternative standard in § 63.2505; wastewater point of determination (POD); storage tanks; and transfer racks.

(3) The applicable control requirements of this subpart, including the level of required control, and for vents, the level of control for each vent.

(4) The control device or treatment process used, as applicable, including a description of operating and/or testing conditions for any associated control device.

(5) The process vents, wastewater POD, transfer racks, and storage tanks (including those from other processes) that are simultaneously routed to the control device or treatment process(s).

(6) The applicable monitoring requirements of this subpart and any parametric level that assures compliance for all emissions routed to the control device or treatment process.

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

(8) For reporting purposes, a change to any of these elements not previously reported, except for paragraph (b)(5) of this section, constitutes a new operating scenario.

(c) A schedule or log of operating scenarios for processes with batch vents from batch operations updated each time a different operating scenario is put into effect.

(d) The information specified in paragraphs (d)(1) and (2) of this section for Group 1 batch process vents in compliance with a percent reduction emission limit in Table 2 to this subpart if some of the vents are controlled to less the percent reduction requirement.

(1) Records of whether each batch operated was considered a standard batch.

(2) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(e) The information specified in paragraph (e)(2), (3), or (4) of this section, as applicable, for each process with Group 2 batch process vents or uncontrolled hydrogen halide and halogen HAP emissions from the sum of all batch and continuous process vents less than 1,000 lb/yr. No records are required for situations described in paragraph (e)(1) of this section.

(1) No records are required if you documented in your notification of compliance status report that the MCPU meets any of the situations described in paragraph (e)(1)(i), (ii), or (iii) of this section.

(i) The MCPU does not process, use, or generate HAP.

(ii) You control the Group 2 batch process vents using a flare that meets the requirements of § 63.987 or § 63.2450(e)(5), as applicable.

(iii) You control the Group 2 batch process vents using a control device for which your determination of worst case for initial compliance includes the contribution of all Group 2 batch process vents.

(2) If you documented in your notification of compliance status report that an MCPU has Group 2 batch process vents because the non-reactive organic HAP is the only HAP and usage is less than 10,000 lb/yr, as specified in § 63.2460(b)(7), you must keep records of the amount of HAP material used, and calculate the daily rolling annual sum of the amount used no less frequently than monthly. If a record indicates usage exceeds 10,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only usage if the usage during the year is less than 10,000 lb.

(3) If you documented in your notification of compliance status report that total uncontrolled organic HAP emissions from the batch process vents in an MCPU will be less than 1,000 lb/yr for the anticipated number of standard batches, then you must keep records of the number of batches operated and calculate a daily rolling annual sum of batches operated no less frequently than monthly. If the number of batches operated results in organic HAP emissions that exceed 1,000 lb/yr, you must estimate emissions for the preceding 12 months based on the number of batches operated and the estimated emissions for a standard batch, and you must begin recordkeeping as specified in paragraph (e)(4) of this section. After 1 year, you may revert to recording only the number of batches if the number of batches operated during the year results in less than 1,000 lb of organic HAP emissions.

(4) If you meet none of the conditions specified in paragraphs (e)(1) through (3) of this section, you must keep records of the information specified in paragraphs (e)(4)(i) through (iv) of this section.

(i) A record of the day each batch was completed and/or the operating hours per day for continuous operations with hydrogen halide and halogen emissions.

(ii) A record of whether each batch operated was considered a standard batch.

(iii) The estimated uncontrolled and controlled emissions for each batch that is considered to be a nonstandard batch.

(iv) Records of the daily 365-day rolling summations of emissions, or alternative records that correlate to the emissions (*e.g.*, number of batches), calculated no less frequently than monthly.

(f) A record of each time a safety device is opened to avoid unsafe conditions in accordance with § 63.2450(p).

(g) Records of the results of each CPMS calibration check and the maintenance performed, as specified in § 63.2450(k)(1).

(h) Except as specified in paragraph (l) of this section, for each CEMS, you must keep records of the date and time that each deviation started and stopped, and whether the deviation occurred during a period of startup, shutdown, or malfunction or during another period.

(i) For each PUG, you must keep records specified in paragraphs (i)(1) through (5) of this section.

(1) Descriptions of the MCPU and other process units in the initial PUG required by § 63.2535(l)(1)(v).

(2) Rationale for including each MCPU and other process unit in the initial PUG (*i.e.*, identify the overlapping equipment between process units) required by § 63.2535(l)(1)(v).

(3) Calculations used to determine the primary product for the initial PUG required by § 63.2535(l)(2)(iv).

(4) Descriptions of process units added to the PUG after the creation date and rationale for including the additional process units in the PUG as required by § 63.2535(l)(1)(v).

(5) The calculation of each primary product redetermination required by § 63.2535(l)(2)(iv).

(j) In the SSMP required by § 63.6(e)(3) of subpart A, you are not required to include Group 2 emission points, unless those emission points are used in an emissions average. For equipment leaks, the SSMP requirement is limited to control devices and is optional for other equipment. On and after August 12, 2023, this paragraph (j) no longer applies.

(k) For each bag leak detector used to monitor PM HAP emissions from a fabric filter, maintain records of any bag leak detection alarm, including the date and time, with a brief explanation of the cause of the alarm and the corrective action taken.

(l) Beginning no later than the compliance dates specified in § 63.2445(g), paragraph (h) of this section no longer applies. Instead, for each deviation from an emission limit, operating limit, or work practice standard, you must keep a record of the information specified in paragraph (l)(1) through (3) of this section. The records shall be maintained as specified in § 63.10(b)(1) of subpart A.

(1) In the event that an affected unit does not meet an applicable standard, record the number of deviations. For each deviation record the date, time, and duration of each deviation.

(2) For each deviation from an applicable standard, record and retain a list of the affected sources or equipment, an estimate of the quantity of each regulated pollutant emitted over any emission limit and a description of the method used to estimate the emissions.

(3) Record actions taken to minimize emissions in accordance with § 63.2450(u) and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(m) For each flare subject to the requirements in § 63.2450(e)(5), you must keep records specified in paragraphs (m)(1) through (14) of this section in lieu of the information required in § 63.998(a)(1) of subpart SS.

(1) Retain records of the output of the monitoring device used to detect the presence of a pilot flame or flare flame as required in § 63.670(b) of subpart CC and the presence of a pilot flame as required in § 63.2450(e)(5)(viii)(D) for a minimum of 2 years. Retain records of each 15-minute block during which there was at least one minute that no pilot flame or flare flame is present when regulated material is routed to a flare for a minimum of 5 years. For a pressure-assisted multi-point flare that uses cross-lighting, retain records of each 15-minute block during which there was at least one minute that no pilot flame is present on each stage when regulated material is routed to a flare for a minimum of 5 years. You may reduce the collected minute-by-minute data to a 15-minute block basis with an indication of whether there was at least one minute where no pilot flame or flare flame was present.

(2) Retain records of daily visible emissions observations as specified in paragraphs (m)(2)(i) through (iv) of this section, as applicable, for a minimum of 3 years.

(i) To determine when visible emissions observations are required, the record must identify all periods when regulated material is vented to the flare.

(ii) If visible emissions observations are performed using Method 22 of 40 CFR part 60, appendix A-7, then the record must identify whether the visible emissions observation was performed, the results of each observation, total duration of observed visible emissions, and whether it was a 5-minute or 2-hour observation. Record the date and start time of each visible emissions observation.

(iii) If a video surveillance camera is used pursuant to § 63.670(h)(2) of subpart CC, then the record must include all video surveillance images recorded, with time and date stamps.

(iv) For each 2 hour period for which visible emissions are observed for more than 5 minutes in 2 consecutive hours, then the record must include the date and start and end time of the 2 hour period and an estimate of the cumulative number of minutes in the 2 hour period for which emissions were visible.

(3) The 15-minute block average cumulative flows for flare vent gas and, if applicable, total steam, perimeter assist air, and premix assist air specified to be monitored under § 63.670(i) of subpart CC, along with the date and time interval for the 15-minute block. If multiple monitoring locations are used to determine cumulative vent gas flow, total steam, perimeter assist air, and premix assist air, then retain records of the 15-minute block average flows for each monitoring location for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years. If pressure and temperature monitoring is used, then retain records of the 15-minute block average temperature, pressure, and molecular weight of the flare vent gas or assist gas stream for each measurement location used to determine the 15-minute block average cumulative flows for a minimum of 2 years, and retain the 15-minute block average cumulative flows that are used in subsequent calculations for a minimum of 5 years.

(4) The flare vent gas compositions specified to be monitored under § 63.670(j) of subpart CC. Retain records of individual component concentrations from each compositional analysis for a minimum of 2 years. If an NHVvg analyzer is used, retain records of the 15-minute block average values for a minimum of 5 years.

(5) Each 15-minute block average operating parameter calculated following the methods specified in § 63.670(k) through (n) of subpart CC, as applicable.

(6) All periods during which operating values are outside of the applicable operating limits specified in §§ 63.670(d) through (f) of subpart CC and 63.2450(e)(5)(viii) when regulated material is being routed to the flare.

(7) All periods during which you do not perform flare monitoring according to the procedures in § 63.670(g) through (j) of subpart CC.

(8) For pressure-assisted multi-point flares, if a stage of burners on the flare uses cross-lighting, then a record of any changes made to the distance between burners.

(9) For pressure-assisted multi-point flares, all periods when the pressure monitor(s) on the main flare header show burners are operating outside the range of the manufacturer's specifications. Indicate the date and time for each period, the pressure measurement, the stage(s) and number of burners affected, and the range of manufacturer's specifications.

(10) For pressure-assisted multi-point flares, all periods when the staging valve position indicator monitoring system indicates a stage of the pressure-assisted multi-point flare should not be in operation and when a stage of the pressure-assisted multi-point flare should be in operation and is not. Indicate the date and time for each period, whether the stage was supposed to be open, but was closed or vice versa, and the stage(s) and number of burners affected.

(11) Records of periods when there is flow of vent gas to the flare, but when there is no flow of regulated material to the flare, including the start and stop time and dates of periods of no regulated material flow.

(12) Records when the flow of vent gas exceeds the smokeless capacity of the flare, including start and stop time and dates of the flaring event.

(13) Records of the root cause analysis and corrective action analysis conducted as required in §§ 63.670(o)(3) of subpart CC and 63.2450(e)(5)(v), including an identification of the affected flare, the date and duration of the event, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under § 63.670(o)(5)(i) of subpart CC.

(14) For any corrective action analysis for which implementation of corrective actions are required in § 63.670(o)(5) of subpart CC, a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(n) For each flow event from a bypass line subject to the requirements in § 63.2450(e)(6), you must maintain records sufficient to determine whether or not the detected flow included flow requiring control. For each flow event from a bypass line requiring control that is released either directly to the atmosphere or to a control device not meeting the requirements specified in Tables 1 through 7 to this subpart, you must include an estimate of the volume of gas, the concentration of organic HAP in the gas and the resulting emissions of organic HAP that bypassed the control device using process knowledge and engineering estimates.

(o) For each nonregenerative adsorber and regenerative adsorber that is regenerated offsite subject to the requirements in § 63.2450(e)(7), you must keep the applicable records specified in paragraphs (o)(1) through ~~(4)~~(3) of this section.

(1) ~~Outlet HAP or TOC concentration for each adsorber bed measured during each performance test conducted.~~ Breakthrough limit and bed life established according to § 63.2450(e)(7)(i).

(2) ~~Daily outlet HAP or TOC concentration. Each outlet HAP or TOC concentration measured according to §§ 63.2450(e)(7)(ii) and (e)(7)(iii).~~

(3) Date and time you last replaced the adsorbent.

~~(4) If you conduct monitoring less frequently than daily as specified in § 63.2450(e)(7)(iii)(B), you must record the average life of the bed.~~

(p) For each maintenance vent opening subject to the requirements in § 63.2450(v), you must keep the applicable records specified in paragraphs (p)(1) through (5) of this section.

(1) You must maintain standard site procedures used to de-inventory equipment for safety purposes (*e.g.*, hot work or vessel entry procedures) to document the procedures used to meet the requirements in § 63.2450(v). The current copy of the procedures must be retained and available on-site at all times. Previous versions of the standard site procedures, as applicable, must be retained for five years.

(2) If complying with the requirements of § 63.2450(v)(1)(i) and the ~~lower explosive limit~~concentration of the vapor at the time of the vessel opening exceeds 10 percent of its LEL, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and the ~~lower explosive limit~~concentration of the vapor at the time of the vessel opening.

(3) If complying with the requirements of § 63.2450(v)(1)(ii) and either the vessel pressure at the time of the vessel opening exceeds 5 psig or the ~~lower explosive limit~~concentration of the vapor at the time of the active purging was initiated exceeds 10 percent of its LEL, identification of the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, the pressure of the vessel or

equipment at the time of discharge to the atmosphere and, if applicable, the ~~lower-explosive~~ limitconcentration of the vapors in the equipment when active purging was initiated.

(4) If complying with the requirements of § 63.2450(v)(1)(iii), records of the estimating procedures used to determine the total quantity of VOC in the equipment and the type and size limits of equipment that contain less than 50 pounds of VOC at the time of maintenance vent opening. For each maintenance vent opening that contains greater than 50 pounds of VOC for which the de-inventory procedures specified in paragraph (p)(1) of this section are not followed or for which the equipment opened exceeds the type and size limits established in the records specified in this paragraph (p)(4), records that identify the maintenance vent, the process units or equipment associated with the maintenance vent, the date of maintenance vent opening, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere.

(5) If complying with the requirements of § 63.2450(v)(1)(iv), identification of the maintenance vent, the process units or equipment associated with the maintenance vent, records documenting actions taken to comply with other applicable alternatives and why utilization of this alternative was required, the date of maintenance vent opening, the equipment pressure and ~~lower-explosive-limit~~ concentration of the vapors in the equipment at the time of discharge, an indication of whether active purging was performed and the pressure of the equipment during the installation or removal of the blind if active purging was used, the duration the maintenance vent was open during the blind installation or removal process, and records used to estimate the total quantity of VOC in the equipment at the time the maintenance vent was opened to the atmosphere for each applicable maintenance vent opening.

(q) For each pressure relief device subject to the pressure release management work practice standards in § 63.2480(e), you must keep the records specified in paragraphs (q)(1) through (3) of this section.

(1) Records of the prevention measures implemented as required in § 63.2480(e)(3)(ii).

(2) Records of the number of releases during each calendar year and, prior to [INSERT date 60 days after date of publication of final rule in the Federal Register], the number of those releases for which the root cause was determined to be a *force majeure* event. Keep these records for the current calendar year and the past 5 calendar years.

(3) For each release to the atmosphere, you must keep the records specified in paragraphs (q)(3)(i) through (iv) of this section.

(i) The start and end time and date of each pressure release to the atmosphere.

(ii) Records of any data, assumptions, and calculations used to estimate of the mass quantity of each organic HAP released during the event.

(iii) Records of the root cause analysis and corrective action analysis conducted as required in § 63.2480(e)(3)(iii), including an identification of the affected facility, a statement noting whether the event resulted from the same root cause(s) identified in a previous analysis and either a description of the recommended corrective action(s) or an explanation of why corrective action is not necessary under § 63.2480(e)(7)(i).

(iv) For any corrective action analysis for which implementation of corrective actions are required in § 63.2480(e)(7), a description of the corrective action(s) completed within the first 45 days following the discharge and, for action(s) not already completed, a schedule for implementation, including proposed commencement and completion dates.

(r) For each heat exchange system, beginning no later than the compliance dates specified in § 63.2445(g), the recordkeeping requirements of § 63.104(f)(1) no longer apply; instead, you must keep records in paragraphs (r)(1) through (4) of this section.

(1) Monitoring data required by § 63.2490(d) and (e) that indicate a leak, the date the leak was detected, or, if applicable, the basis for determining there is no leak.

(2) The dates of efforts to repair leaks.

(3) The method or procedures used to confirm repair of a leak and the date the repair was confirmed.

(4) Documentation of delay of repair as specified in paragraphs (r)(4)(i) through (iv) of this section.

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

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

(iii) The date and concentration or mass emissions rate of the leak as first identified and the results of all subsequent monitoring events during the delay of repair.

(iv) An estimate of the potential total hydrocarbon emissions (if you monitor the cooling water for leaks according to § 63.2490(d)(1)) or monitored substance(s) emissions (if you monitor the cooling water for leaks according to § 63.2490(e)) from the leaking heat exchange system or heat exchanger for each required delay of repair monitoring interval following the procedures in paragraphs (r)(4)(iv)(A) through (E) of this section.

(A) If you comply with the total strippable hydrocarbon concentration leak action level, as specified in § 63.2490(d)(1)(iv), you must calculate the mass emissions rate by complying with the requirements of § 63.2490(d)(1)(iii)(B) or by determining the mass flow rate of the cooling water at the monitoring location where the leak was detected. If the monitoring location

is an individual cooling tower riser, determine the total cooling water mass flow rate to the cooling tower. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. If you determine the mass flow rate of the cooling water, calculate the mass emissions rate by converting the stripping gas leak concentration (in ppmv as methane) to an equivalent liquid concentration, in parts per million by weight (ppmw), using equation 7-1 from "Air Stripping Method (Modified El Paso Method) for Determination of Volatile Organic Compound Emissions from Water Sources" (incorporated by reference - see § 63.14) and multiply the equivalent liquid concentration by the mass flow rate of the cooling water.

(B) For delay of repair monitoring intervals prior to repair of the leak, calculate the potential total hydrocarbon emissions or monitored substance(s) emissions for the leaking heat exchange system or heat exchanger for the monitoring interval by multiplying the mass emissions rate, determined in § 63.2490(d)(1)(iii)(B) or paragraph (r)(4)(iv)(A) or (D) of this section, by the duration of the delay of repair monitoring interval. The duration of the delay of repair monitoring interval is the time period starting at midnight on the day of the previous monitoring event or at midnight on the day the repair would have had to be completed if the repair had not been delayed, whichever is later, and ending at midnight of the day the of the current monitoring event.

(C) For delay of repair monitoring intervals ending with a repaired leak, calculate the potential total hydrocarbon emissions or monitored substance(s) emissions for the leaking heat exchange system or heat exchanger for the final delay of repair monitoring interval by multiplying the duration of the final delay of repair monitoring interval by the mass emissions rate determined for the last monitoring event prior to the re-monitoring event used to verify the

leak was repaired. The duration of the final delay of repair monitoring interval is the time period starting at midnight of the day of the last monitoring event prior to re-monitoring to verify the leak was repaired and ending at the time of the re-monitoring event that verified that the leak was repaired.

(D) If you monitor the cooling water for leaks according to § 63.2490(e), you must calculate the mass emissions rate by determining the mass flow rate of the cooling water at the monitoring location where the leak was detected. Cooling water mass flow rates may be determined using direct measurement, pump curves, heat balance calculations, or other engineering methods. Once determined, multiply the mass flow rate of the cooling water by the concentration of the measured substance(s).

(s) For process vents and storage tanks in ethylene oxide service subject to the requirements of § 63.2493, you must keep the records specified in paragraphs (s)(1) through (5) of this section in addition to those records specified in paragraph (a) of this section. Records for equipment in ethylene oxide service subject to the requirements of § 63.2493 are specified in paragraph (a) of this section.

(1) For process vents, include all uncontrolled, undiluted ethylene oxide concentration measurements, and the calculations you used to determine the total uncontrolled ethylene oxide mass emission rate for the sum of all vent gas streams.

(2) For storage tanks, records of the concentration of ethylene oxide of the fluid stored in each storage tank.

(3) For equipment, records of the percent ethylene oxide content of the process fluid and the method used to determine it.

(4) If you vent emissions through a closed-vent system to a non-flare control device, then you must keep records of all periods during which operating values are outside of the applicable operating limits specified in § 63.2493(b)(4) through (6) when regulated material is being routed to the non-flare control device. The record must specify the operating parameter, the applicable limit, and the highest (for maximum operating limits) or lowest (for minimum operating limits) value recorded during the period.

(5) For pressure vessels subject to § 63.2493(c), records as specified in paragraphs (s)(5)(i) through (iv) of this section.

(i) The date of each performance test conducted according to § 63.2493(c)(2).

(ii) The instrument reading of each performance test conducted according to § 63.2493(c)(2), including the following:

(A) Date each defect was detected.

(B) Date of the next performance test that shows the instrument reading is less than 500 ppmv.

(C) Start and end dates of each period after the date in paragraph (s)(5)(ii)(A) of this section when the pressure vessel was completely empty.

(D) Estimated emissions from each defect.

(t) Any records required to be maintained by this part that are submitted electronically via the EPA's CEDRI may be maintained in electronic format. This ability to maintain electronic copies does not affect the requirement for facilities to make records, data, and reports available upon request to a delegated air agency or the EPA as part of an on-site compliance evaluation.

(u) Beginning no later than the compliance dates specified in § 63.2445(g), the referenced provisions specified in paragraphs (u)(1) through (8) of this section do not apply when demonstrating compliance with paragraph (a) of this section.

(1) Section 63.103(c)(2)(i) of subpart F.

(2) Section 63.103(c)(2)(ii) of subpart F.

(3) The phrase “start-up, shutdown and malfunction and” from § 63.103(c)(3) of subpart F.

(4) The phrase “other than startups, shutdowns, or malfunctions (*e.g.*, a temperature reading of –200 °C on a boiler),” from § 63.152(g)(1)(i) of subpart G.

(5) The phrase “other than a startup, shutdown, or malfunction” from § 63.152(g)(1)(ii)(C) of subpart G.

(6) The phrase “other than startups, shutdowns, or malfunctions” from § 63.152(g)(1)(iii) of subpart G.

(7) The phrase “other than a startup, shutdown, or malfunction” from § 63.152(g)(2)(iii) of subpart G.

(8) Section 63.152(g)(2)(iv)(A) of subpart G.

#### **Other Requirements and Information**

#### **§ 63.2535 What compliance options do I have if part of my plant is subject to both this subpart and another subpart?**

For any equipment, emission stream, or wastewater stream not subject to § 63.2493 but subject to other provisions of both this subpart and another subpart, you may elect to comply only with the provisions as specified in paragraphs (a) through (l) of this section. You also must identify the subject equipment, emission stream, or wastewater stream, and the provisions with

which you will comply, in your notification of compliance status report required by § 63.2520(d).

**(a) *Compliance with other subparts of this part 63.***

(1) If you have an MCPU that includes a batch process vent that also is part of a CMPU as defined in subparts F and G of this part 63, you must comply with the emission limits; operating limits; work practice standards; and the compliance, monitoring, reporting, and recordkeeping requirements for batch process vents in this subpart, and you must continue to comply with the requirements in subparts F, G, and H of this part 63 that are applicable to the CMPU and associated equipment.

(2) After the compliance dates specified in § 63.2445, at an offsite reloading or cleaning facility subject to § 63.1253(f), as referenced from § 63.2470(e), compliance with the monitoring, recordkeeping, and reporting provisions of any other subpart of this part 63 constitutes compliance with the monitoring, recordkeeping, and reporting provisions of § 63.1253(f)(7)(ii) or § 63.1253(f)(7)(iii). You must identify in your notification of compliance status report required by § 63.2520(d) the subpart of this part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

**(b) *Compliance with 40 CFR parts 264 and 265, subparts AA, BB, and/or CC.***

(1) After the compliance dates specified in § 63.2445, if a control device that you use to comply with this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA, BB, or CC; or the monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA, BB, or CC; and you comply with the periodic reporting requirements under 40 CFR part 264, subpart AA, BB, or CC that would apply to the device if your facility had final-permitted status, you may elect to comply either with the

monitoring, recordkeeping, and reporting requirements of this subpart; or with the monitoring and recordkeeping requirements in 40 CFR part 264 or 265 and the reporting requirements in 40 CFR part 264, as described in this paragraph (b)(1), which constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. If you elect to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, you must report the information described in § 63.2520(e).

(2) After the compliance dates specified in § 63.2445, if you have an affected source with equipment that is also subject to 40 CFR part 264, subpart BB, or to 40 CFR part 265, subpart BB, then compliance with the recordkeeping and reporting requirements of 40 CFR parts 264 and/or 265 may be used to comply with the recordkeeping and reporting requirements of this subpart, to the extent that the requirements of 40 CFR parts 264 and/or 265 duplicate the requirements of this subpart.

(c) *Compliance with 40 CFR part 60, subpart Kb and 40 CFR part 61, subpart Y.* After the compliance dates specified in § 63.2445, you are in compliance with the provisions of this subpart FFFF for any storage tank that is assigned to an MCPU and that is both controlled with a floating roof and in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y. You are in compliance with this subpart FFFF if you have a storage tank with a fixed roof, closed-vent system, and control device in compliance with the provisions of either 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, except that you must comply with the monitoring, recordkeeping, and reporting requirements in this subpart FFFF. Alternatively, if a storage tank assigned to an MCPU is subject to control under 40 CFR part 60, subpart Kb, or 40 CFR part 61, subpart Y, you may elect to comply only with the requirements for Group 1 storage tanks in this subpart FFFF.

(d) ***Compliance with subpart I, GGG, or MMM of this part.*** After the compliance dates specified in § 63.2445, if you have an affected source with equipment subject to subpart I, GGG, or MMM of this part, you may elect to comply with the provisions of subpart H, GGG, or MMM of this part, respectively, for all such equipment, except the affirmative defense requirements in subparts GGG and MMM no longer apply.

(e) ***Compliance with subpart GGG of this part 63 for wastewater.*** After the compliance dates specified in § 63.2445, if you have an affected source subject to this subpart and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in § 63.1256, you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams.

(f) ***Compliance with subpart MMM of this part 63 for wastewater.*** After the compliance dates specified in § 63.2445, if you have an affected source subject to this subpart, and you have an affected source that generates wastewater streams that meet the applicability thresholds specified in § 63.1362(d), you may elect to comply with the provisions of this subpart FFFF for all such wastewater streams (except that the 99 percent reduction requirement for streams subject to § 63.1362(d)(10) still applies).

(g) ***Compliance with other regulations for wastewater.*** After the compliance dates specified in § 63.2445, if you have a Group 1 wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272, you may elect to determine whether this subpart or 40 CFR parts 260 through 272 contain the more stringent control requirements (*e.g.*, design, operation, and inspection requirements for waste management units; numerical treatment standards; etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements. Compliance with provisions of 40 CFR parts 260 through 272 that are determined to be more

stringent than the requirements of this subpart constitute compliance with this subpart. For example, provisions of 40 CFR parts 260 through 272 for treatment units that meet the conditions specified in § 63.138(h) constitute compliance with this subpart. You must identify in the notification of compliance status report required by § 63.2520(d) the information and procedures that you used to make any stringency determinations.

(h) ***Compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR.*** After the compliance dates specified in § 63.2445, if you have an MCPU that contains equipment subject to the provisions of this subpart that are also subject to the provisions of 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to apply this subpart to all such equipment in the MCPU. If an MCPU subject to the provisions of this subpart has equipment to which this subpart does not apply but which is subject to a standard in 40 CFR part 60, subpart DDD, III, NNN, or RRR, you may elect to comply with the requirements for Group 1 process vents in this subpart for such equipment. If you elect any of these methods of compliance, you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (h), will constitute compliance with 40 CFR part 60, subpart DDD, III, NNN, or RRR, as applicable.

(i) ***Compliance with 40 CFR part 61, subpart BB.***

(1) After the compliance dates specified in § 63.2445, a Group 1 transfer rack, as defined in § 63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, you are required to comply only with the provisions of this subpart.

(2) After the compliance dates specified in § 63.2445, a Group 2 transfer rack, as defined in § 63.2550, that is also subject to the provisions of 40 CFR part 61, subpart BB, is required to comply with the provisions of either paragraph (1)(2)(i) or (ii) of this section.

(i) If the transfer rack is subject to the control requirements specified in § 61.302 of 40 CFR part 61, subpart BB, then you may elect to comply with either the requirements of 40 CFR part 61, subpart BB, or the requirements for Group 1 transfer racks under this subpart FFFF.

(ii) If the transfer rack is subject only to reporting and recordkeeping requirements under 40 CFR part 61, subpart BB, then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 transfer racks, and you are exempt from the reporting and recordkeeping requirements in 40 CFR part 61, subpart BB.

(j) **Compliance with 40 CFR part 61, subpart FF.** After the compliance date specified in § 63.2445, for a Group 1 or Group 2 wastewater stream that is also subject to the provisions of 40 CFR 61.342(c) through (h), and is not exempt under 40 CFR 61.342(c)(2) or (3), you may elect to comply only with the requirements for Group 1 wastewater streams in this subpart FFFF. If a Group 2 wastewater stream is exempted from 40 CFR 61.342(c)(1) under 40 CFR 61.342(c)(2) or (3), then you are required to comply only with the reporting and recordkeeping requirements specified in this subpart for Group 2 wastewater streams, and you are exempt from the requirements in 40 CFR part 61, subpart FF.

(k) **Compliance with 40 CFR part 60, subpart VV or VVa, and 40 CFR part 61, subpart V.** Except as specified in paragraphs (k)(1) and (2) of this section, after the compliance date specified in § 63.2445, if you have an affected source with equipment that is also subject to the requirements of 40 CFR part 60, subpart VV or VVa, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. After the compliance date specified in §

63.2445, if you have an affected source with equipment to which this subpart does not apply, but which is subject to the requirements of 40 CFR part 60, subpart VV or VVa, or 40 CFR part 61, subpart V, you may elect to apply this subpart to all such equipment. If you elect either of the methods of compliance in this paragraph (k), you must consider all total organic compounds, minus methane and ethane, in such equipment for purposes of compliance with this subpart, as if they were organic HAP. Compliance with the provisions of this subpart, in the manner described in this paragraph (k), will constitute compliance with 40 CFR part 60, subpart VV or VVa, and 40 CFR part 61, subpart V, as applicable.

(1) The provision in § 63.2480(b)(4) does not apply to connectors in gas/vapor and light liquid service that are subject to monitoring under 40 CFR 60.482-11a if complying with the compliance option in this paragraph (k).

(2) Beginning no later than the compliance dates specified in § 63.2445(g), equipment that must be controlled according to this subpart and subpart VVa of 40 CFR part 60 is required only to comply with the equipment leak requirements of this subpart, except you must also comply with the calibration drift assessment requirements specified at 40 CFR 60.485a(b)(2) if they are required to do so in subpart VVa of 40 CFR part 60. When complying with the calibration drift assessment requirements at 40 CFR 60.485a(b)(2), the requirement at 40 CFR 60.486a(e)(8)(v) to record the instrument reading for each scale used applies.

(l) ***Applicability of process units included in a process unit group.*** You may elect to develop and comply with the requirements for PUG in accordance with paragraphs (l)(1) through (3) of this section.

(1) ***Procedures to create process unit groups.*** Develop and document changes in a PUG in accordance with the procedures specified in paragraphs (l)(1)(i) through (v) of this section.

(i) Initially, identify an MCPU that is created from nondedicated equipment that will operate on or after November 10, 2003 and identify all processing equipment that is part of this MCPU, based on descriptions in operating scenarios.

(ii) Add to the group any other nondedicated MCPU and other nondedicated process units expected to be operated in the 5 years after the date specified in paragraph (I)(1)(i) of this section, provided they satisfy the criteria specified in paragraphs (I)(1)(ii)(A) through (C) of this section. Also identify all of the processing equipment used for each process unit based on information from operating scenarios and other applicable documentation.

(A) Each process unit that is added to a group must have some processing equipment that is also part of one or more process units in the group.

(B) No process unit may be part of more than one PUG.

(C) The processing equipment used to satisfy the requirement of paragraph (I)(1)(ii)(A) of this section may not be a storage tank or control device.

(iii) The initial PUG consists of all of the processing equipment for the process units identified in paragraphs (I)(1)(i) and (ii) of this section. As an alternative to the procedures specified in paragraphs (I)(1)(i) and (ii) of this section, you may use a PUG that was developed in accordance with § 63.1360(h) as your initial PUG.

(iv) Add process units developed in the future in accordance with the conditions specified in paragraphs (I)(1)(ii)(A) and (B) of this section.

(v) Maintain records that describe the process units in the initial PUG, the procedure used to create the PUG, and subsequent changes to each PUG as specified in § 63.2525(i). Submit the records in reports as specified in § 63.2520(d)(2)(ix) and (e)(8).

(2) ***Determine primary product.*** You must determine the primary product of each PUG created in paragraph (1)(1) of this section according to the procedures specified in paragraphs (1)(2)(i) through (iv) of this section.

(i) The primary product is the type of product (*e.g.*, organic chemicals subject to § 63.2435(b)(1), pharmaceutical products subject to § 63.1250, or pesticide active ingredients subject to § 63.1360) expected to be produced for the greatest operating time in the 5-year period specified in paragraph (1)(1)(ii) of this section.

(ii) If the PUG produces multiple types of products equally based on operating time, then the primary product is the type of product with the greatest production on a mass basis over the 5-year period specified in paragraph (1)(1)(ii) of this section.

(iii) At a minimum, you must redetermine the primary product of the PUG following the procedure specified in paragraphs (1)(2)(i) and (ii) of this section every 5 years.

(iv) You must record the calculation of the initial primary product determination as specified in § 63.2525(i)(3) and report the results in the notification of compliance status report as specified in § 63.2520(d)(8)(ix). You must record the calculation of each redetermination of the primary product as specified in § 63.2525(i)(5) and report the calculation in a compliance report submitted no later than the report covering the period for the end of the 5th year after cessation of production of the previous primary product, as specified in § 63.2520(e)(8).

(3) ***Compliance requirements.***

(i) If the primary product of the PUG is determined according to paragraph (1)(2) of this section to be material described in § 63.2435(b)(1), then you must comply with this subpart for each MCPU in the PUG. You may also elect to comply with this subpart for all other process units in the PUG, which constitutes compliance with other part 63 rules.

(ii) If the primary product of the PUG is determined according to paragraph (1)(2) of this section to be material not described in § 63.2435(b)(1), then you must comply with paragraph (1)(3)(ii)(A), (B), or (C) of this section, as applicable.

(A) If the primary product is subject to subpart GGG of this part 63, then comply with the requirements of subpart GGG for each MCPU in the PUG.

(B) If the primary product is subject to subpart MMM of this part 63, then comply with the requirements of subpart MMM for each MCPU in the PUG.

(C) If the primary product is subject to any subpart in this part 63 other than subpart GGG or subpart MMM, then comply with the requirements of this subpart for each MCPU in the PUG.

(iii) The requirements for new and reconstructed sources in the alternative subpart apply to all MCPU in the PUG if and only if the affected source under the alternative subpart meets the requirements for construction or reconstruction.

(m) ***Overlap of this subpart with other regulations for flares.***

(1) Beginning no later than the compliance dates specified in § 63.2445(g), flares that control ethylene oxide emissions from affected sources in ethylene oxide service as defined in § 63.2550 or are used to control emissions from MCPUs that produce olefins and polyolefins, subject to the provisions of 40 CFR 60.18 or 63.11, and used as a control device for an emission point subject to the emission limits and work practice standards in Tables 1, 2, 4 or 5 to this subpart are required to comply only with the provisions specified in § 63.2450(e)(5). At any time before the compliance dates specified in § 63.2445(g), flares that are subject to the provisions of 40 CFR 60.18 or 63.11 and elect to comply with the requirements in § 63.2450(e)(5) are required to comply only with the provisions specified in this subpart. For purposes of compliance with

this paragraph (m), “MCPUs that produces olefins or polyolefins” includes only those MCPUs that manufacture ethylene, propylene, polyethylene, and/or polypropylene as a product. By-products and impurities as defined in § 63.101, as well as wastes and trace contaminants, are not considered products.

(2) Beginning no later than the compliance dates specified in § 63.2445(g), flares subject to § 63.987 and used as a control device for an emission point subject to the emission limits and work practice standards in Tables 1, 2, 4 or 5 to this subpart are only required to comply with § 63.2450(e)(5).

(3) Beginning no later than the compliance dates specified in § 63.2445(g), flares subject to the requirements in subpart CC of this part and used as a control device for an emission point subject to the emission limits and work practice standards in Tables 1, 2, 4 or 5 to this subpart are only required to comply with the flare requirements in subpart CC of this part. This paragraph (m)(3) does not apply to multi-point pressure assisted flares.

**§ 63.2540 What parts of the General Provisions apply to me?**

Table 12 to this subpart shows which parts of the General Provisions in §§ 63.1 through 63.15 apply to you.

**§ 63.2545 Who implements and enforces this subpart?**

(a) This subpart can be implemented and enforced by us, the U.S. Environmental Protection Agency (U.S. EPA), or a delegated authority such as your State, local, or tribal agency. If the U.S. EPA Administrator has delegated authority to your State, local, or tribal agency, then that agency also has the authority to implement and enforce this subpart. You should contact your U.S. 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 under subpart E of this part, the authorities contained in paragraphs (b)(1) through (5) of this section are retained by the Administrator of U.S. EPA and are not delegated to the state, local, or tribal agency.

(1) Approval of alternatives to the non-opacity emission limits and work practice standards in § 63.2450(a) under § 63.6(g).

(2) Approval of major alternatives to test methods under § 63.7(e)(2)(ii) and (f) and as defined in § 63.90.

(3) Approval of major alternatives to monitoring under § 63.8(f) and as defined in § 63.90.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f) and as defined in § 63.90.

(5) Approval of an alternative to any electronic reporting to the EPA required by this subpart.

**§ 63.2550 What definitions apply to this subpart?**

(a) For an affected source complying with the requirements in subpart SS of this part 63, the terms used in this subpart and in subpart SS of this part 63 have the meaning given them in § 63.981, except as specified in §§ 63.2450(k)(2) and (m), 63.2470(c)(2), 63.2475(b), and paragraph (i) of this section.

(b) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F have the meaning given to them in § 65.2.

(c) For an affected source complying with the requirements in subpart UU of this part 63, the terms used in this subpart and in subpart UU of this part 63 have the meaning given them in § 63.1020.

(d) For an affected source complying with the requirements in subpart WW of this part 63, the terms used in this subpart and subpart WW of this part 63 have the meaning given them in § 63.1061, except as specified in §§ 63.2450(m), 63.2470(c)(2), and paragraph (i) of this section.

(e) For an affected source complying with the requirements in §§ 63.132 through 63.149, the terms used in this subpart and §§ 63.132 through 63.149 have the meaning given them in §§ 63.101 and 63.111, except as specified in § 63.2450(m) and paragraph (i) of this section.

(f) For an affected source complying with the requirements in §§ 63.104 and 63.105, the terms used in this subpart and in §§ 63.104 and 63.105 of this subpart have the meaning given them in § 63.101, except as specified in §§ 63.2450(m), 63.2490(b), and paragraph (i) of this section.

(g) For an affected source complying with requirements in §§ 63.1253, 63.1257, and 63.1258, the terms used in this subpart and in §§ 63.1253, 63.1257, and 63.1258 have the meaning given them in § 63.1251, except as specified in § 63.2450(m) and paragraph (i) of this section.

(h) For an affected source complying with the requirements in 40 CFR part 65, subpart F, the terms used in this subpart and in 40 CFR part 65, subpart F, have the meaning given them in 40 CFR 65.2.

(i) All other terms used in this subpart are defined in the Clean Air Act (CAA), in 40 CFR 63.2, and in this paragraph (i). If a term is defined in § 63.2, § 63.101, § 63.111, § 63.981, §

63.1020, § 63.1061, § 63.1251, or § 65.2 and in this paragraph (i), the definition in this paragraph (i) applies for the purposes of this subpart.

*Ancillary activities* means boilers and incinerators (not used to comply with the emission limits in Tables 1 through 7 to this subpart), chillers and refrigeration systems, and other equipment and activities that are not directly involved (*i.e.*, they operate within a closed system and materials are not combined with process fluids) in the processing of raw materials or the manufacturing of a product or isolated intermediate.

*Batch operation* means a noncontinuous operation involving intermittent or discontinuous feed into equipment, and, in general, involves the emptying of the equipment 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 unit operation or vents from multiple unit operations within a process that are manifolded together into a common header, through which a HAP-containing gas stream is, or has the potential to be, released to the atmosphere. Examples of batch process vents include, but are not limited to, vents on condensers used for product recovery, reactors, filters, centrifuges, and process tanks. The following are not batch process vents for the purposes of this subpart:

- (1) Continuous process vents;
- (2) Bottoms receivers;
- (3) Surge control vessels;
- (4) Gaseous streams routed to a fuel gas system(s) unless on and after August 12, 2023, the fuel gas system(s) supplies a flare of which 50 percent or more of the fuel gas burned in the

flare is derived from an MCPU that has processes and/or equipment in ethylene oxide service, or produces olefins or polyolefins;

(5) Vents on storage tanks, wastewater emission sources, or pieces of equipment subject to the emission limits and work practice standards in Tables 4, 6, and 7 to this subpart;

(6) Drums, pails, and totes;

(7) Flexible elephant trunk systems that draw ambient air (*i.e.*, the system is not ducted, piped, or otherwise connected to the unit operations) away from operators when vessels are opened; and

(8) Except for batch process vents in ethylene oxide service, emission streams from emission episodes that are undiluted and uncontrolled containing less than 50 ppmv HAP are not part of any batch process vent. A vent from a unit operation, or a vent from multiple unit operations that are manifolded together, from which total uncontrolled HAP emissions are less than 200 lb/yr is not a batch process vent; emissions for all emission episodes associated with the unit operation(s) must be included in the determination of the total mass emitted. The HAP concentration or mass emission rate may be determined using any of the following: Process knowledge that no HAP are present in the emission stream; an engineering assessment as discussed in § 63.1257(d)(2)(ii), except that you do not need to demonstrate that the equations in § 63.1257(d)(2)(i) do not apply, and the precompliance reporting requirements specified in § 63.1257(d)(2)(ii)(E) do not apply for the purposes of this demonstration; equations specified in § 63.1257(d)(2)(i), as applicable; test data using Method 18 of 40 CFR part 60, appendix A; or any other test method that has been validated according to the procedures in EPA Method 301 of appendix A to this part.

*Bench-scale process* means a process (other than a research and development facility) that is operated on a small scale, such as one capable of being located on a laboratory bench top. This bench-scale equipment will typically include reagent feed vessels, a small reactor and associated product separator, recovery and holding equipment. These processes are only capable of producing small quantities of product.

*Biofilter* means an enclosed control system such as a tank or series of tanks with a fixed roof that contact emissions with a solid media (such as bark) and use microbiological activity to transform organic pollutants in a process vent stream to innocuous compounds such as carbon dioxide, water, and inorganic salts. Wastewater treatment processes such as aeration lagoons or activated sludge systems are not considered to be biofilters.

*Bottoms receiver* means a tank that collects bottoms from continuous distillation before the stream is sent for storage or for further downstream processing.

*Breakthrough* means the time when the level of HAP or TOC, measured at the outlet of the first bed, has been detected is at the highest concentration allowed to be discharged from the adsorber system and indicates that the adsorber bed should be replaced.

*Construction* means the onsite fabrication, erection, or installation of an affected source or MCPU. Addition of new equipment to an MCPU subject to existing source standards does not constitute construction, but it may constitute reconstruction of the affected source or MCPU if it satisfies the definition of reconstruction in § 63.2.

*Consumption* means the quantity of all HAP raw materials entering a process in excess of the theoretical amount used as reactant, assuming 100 percent stoichiometric conversion. The raw materials include reactants, solvents, and any other additives. If a HAP is generated in the

process as well as added as a raw material, consumption includes the quantity generated in the process.

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

*Continuous process vent* means the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream has the characteristics specified in § 63.107(b) through (h), or meets the criteria specified in § 63.107(i), except:

(1) The reference in § 63.107(e) to a chemical manufacturing process unit that meets the criteria of § 63.100(b) means an MCPU that meets the criteria of § 63.2435(b);

(2) The reference in § 63.107(h)(4) to § 63.113 means Table 1 to this subpart;

(3) The references in § 63.107(h)(7) to §§ 63.119 and 63.126 mean tables 4 and 5 to this subpart; and

(4) For the purposes of § 63.2455, all references to the characteristics of a process vent (*e.g.*, flowrate, total HAP concentration, or TRE index value) mean the characteristics of the gas stream.

(5) The reference to “total organic HAP” in § 63.107(d) means “total HAP” for the purposes of this subpart FFFF.

(6) The references to an “air oxidation reactor, distillation unit, or reactor” in § 63.107 mean any continuous operation for the purposes of this subpart.

(7) A separate determination is required for the emissions from each MCPU, even if emission streams from two or more MCPU are combined prior to discharge to the atmosphere or to a control device.

(8) On and after August 12, 2023, § 63.107(h)(3) applies unless the fuel gas system supplies a flare of which 50 percent or more of the fuel gas burned in the flare is derived from an

MCPU that has processes and/or equipment in ethylene oxide service, or produces olefins or polyolefins.

(9) On and after August 12, 2023, § 63.107(h)(9) no longer applies.

(10) On and after August 12, 2023, § 63.107(i) no longer applies. Instead, a process vent is the point of discharge to the atmosphere (or the point of entry into a control device, if any) of a gas stream if the gas stream meets the criteria specified in this paragraph. The gas stream would meet the characteristics specified in § 63.107(b) through (g) of subpart F, but, for purposes of avoiding applicability, has been deliberately interrupted, temporarily liquefied, routed through any item of equipment for no process purpose, or disposed of in a flare that does not meet the criteria in § 63.11(b) of subpart A or § 63.2450(e)(5) as applicable, or an incinerator that does not reduce emissions of organic HAP by 98 percent or to a concentration of 20 parts per million by volume, whichever is less stringent.

(11) Section 63.107(d) does not apply to continuous process vents in ethylene oxide service.

*Dedicated MCPU* means an MCPU that consists of equipment that is used exclusively for one process, except that storage tanks assigned to the process according to the procedures in § 63.2435(d) also may be shared by other processes.

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

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

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

(3) Before August 12, 2023, fails to meet any emission limit, operating limit, or work practice standard in this subpart during startup, shutdown, or malfunction, regardless of whether or not such failure is permitted by this subpart. On and after August 12, 2023, this paragraph (3) no longer applies.

*Emission point* means each continuous process vent, batch process vent, storage tank, transfer rack, and wastewater stream.

*Energetics* means propellants, explosives, and pyrotechnics and include materials listed at 49 CFR 172.101 as Hazard Class I Hazardous Materials, Divisions 1.1 through 1.6.

*Equipment* means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic HAP service; and any control devices or systems used to comply with Table 6 to this subpart.

*Excess emissions* means emissions greater than those allowed by the emission limit.

*Family of materials* means a grouping of materials with the same basic composition or the same basic end use or functionality produced using the same basic feedstocks with essentially identical HAP emission profiles (primary constituent and relative magnitude on a pound per product basis) and manufacturing equipment configuration. Examples of families of materials include multiple grades of the same product or different variations of a product (*e.g.*, blue, black, and red resins).

*Force majeure* event means a release of HAP, either directly to the atmosphere from a pressure relief device or discharged via a flare, that is demonstrated to the satisfaction of the Administrator to result from an event beyond the owner or operator's control, such as natural disasters; acts of war or terrorism; loss of a utility external to the MCPU (*e.g.*, external power curtailment), excluding power curtailment due to an interruptible service agreement; and fire or explosion originating at a near or adjoining facility outside of the miscellaneous organic chemical manufacturing process unit that impacts the miscellaneous organic chemical manufacturing process unit's ability to operate.

*Group 1 batch process vent* means each of the batch process vents in a process for which the collective uncontrolled organic HAP emissions from all of the batch process vents are greater than or equal to 10,000 lb/yr at an existing source or greater than or equal to 3,000 lb/yr at a new source.

*Group 2 batch process vent* means each batch process vent that does not meet the definition of Group 1 batch process vent.

*Group 1 continuous process vent* means a continuous process vent for which the flow rate is greater than or equal to 0.005 standard cubic meter per minute, and the total resource effectiveness index value, calculated according to § 63.2455(b), is less than or equal to 1.9 at an existing source and less than or equal to 5.0 at a new source.

*Group 2 continuous process vent* means a continuous process vent that does not meet the definition of a Group 1 continuous process vent.

*Group 1 storage tank* means a storage tank with a capacity greater than or equal to 10,000 gal storing material that has a maximum true vapor pressure of total HAP greater than or

equal to 6.9 kilopascals at an existing source or greater than or equal to 0.69 kilopascals at a new source.

*Group 2 storage tank* means a storage tank that does not meet the definition of a Group 1 storage tank.

*Group 1 transfer rack* means a transfer rack that loads more than 0.65 million liters/year of liquids that contain organic HAP with a rack-weighted average partial pressure, as defined in § 63.111, greater than or equal to 1.5 pound per square inch absolute.

*Group 2 transfer rack* means a transfer rack that does not meet the definition of a Group 1 transfer rack.

*Group 1 wastewater stream* means a wastewater stream consisting of process wastewater at an existing or new source that meets the criteria for Group 1 status in § 63.2485(c) for compounds in Tables 8 and 9 to this subpart and/or a wastewater stream consisting of process wastewater at a new source that meets the criteria for Group 1 status in § 63.132(d) for compounds in Table 8 to subpart G of this part 63.

*Group 2 wastewater stream* means any process wastewater stream that does not meet the definition of a Group 1 wastewater stream.

*Halogen atoms* mean chlorine and fluorine.

*Halogenated vent stream* means a vent stream determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kilograms per hour or greater determined by the procedures presented in § 63.115(d)(2)(v).

*HAP metals* means the metal portion of antimony compounds, arsenic compounds, beryllium compounds, cadmium compounds, chromium compounds, cobalt compounds, lead

compounds, manganese compounds, mercury compounds, nickel compounds, and selenium compounds.

*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 miscellaneous organic chemical manufacturing process unit heat exchangers that are in organic HAP service, as defined in this subpart, serviced by that cooling tower, and all water lines to and from these miscellaneous organic chemical manufacturing process unit heat exchangers. For once-through systems, the heat exchange system consists of all heat exchangers that are in organic HAP service, as defined in this subpart, servicing an individual miscellaneous organic chemical manufacturing process unit and all water lines to and from these heat exchangers. Sample coolers or pump seal coolers are not considered heat exchangers for the purpose of this definition and are not part of the heat exchange system. Intentional direct contact with process fluids results in the formation of a wastewater.

*Hydrogen halide and halogen HAP* means hydrogen chloride, hydrogen fluoride, and chlorine.

*In ethylene oxide service* means the following:

(1) For equipment leaks, any equipment that contains or contacts a fluid (liquid or gas) that is at least 0.1 percent by weight of ethylene oxide. If information exists that suggests ethylene oxide could be present in equipment, the equipment is considered to be “in ethylene oxide service” unless sampling and analysis is performed as specified in § 63.2492 to

demonstrate that the equipment does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in equipment, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(2) For process vents, each batch and continuous process vent in a process that, when uncontrolled, contains a concentration of greater than or equal to 1 ppmv undiluted ethylene oxide, and when combined, the sum of all these process vents would emit uncontrolled ethylene oxide emissions greater than or equal to 5 lb/yr (2.27 kg/yr). If information exists that suggests ethylene oxide could be present in a batch or continuous process vent, then the batch or continuous process vent is considered to be “in ethylene oxide service” unless an analysis is performed as specified in § 63.2492 to demonstrate that the batch or continuous process vent does not meet the definition of being “in ethylene oxide service”. Examples of information that could suggest ethylene oxide could be present in a batch or continuous process vent, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

(3) For storage tanks, storage tanks of any capacity and vapor pressure storing a liquid that is at least 0.1 percent by weight of ethylene oxide. If knowledge exists that suggests ethylene oxide could be present in a storage tank, then the storage tank is considered to be “in ethylene oxide service” unless ~~sampling and analysis is performed as specified in § 63.2492~~ sampling and analysis is performed as specified in § 63.2492 to demonstrate that the storage tank does not meet the definition of being “in ethylene oxide service”. The exemptions for “vessels storing organic liquids that contain HAP only as impurities” and “pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere” listed in the definition of

“storage tank” in this section do not apply for storage tanks that may be in ethylene oxide service. Examples of information that could suggest ethylene oxide could be present in a storage tank, include calculations based on safety data sheets, material balances, process stoichiometry, or previous test results provided the results are still relevant to the current operating conditions.

*In organic HAP service* means that a piece of equipment either contains or contacts a fluid (liquid or gas) that is at least 5 percent by weight of total organic HAP as determined according to the provisions of § 63.180(d). The provisions of § 63.180(d) also specify how to determine that a piece of equipment is not in organic HAP service.

*Isolated intermediate* means a product of a process that is stored before subsequent processing. An isolated intermediate is usually a product of a chemical synthesis, fermentation, or biological extraction process. Storage of an isolated intermediate marks the end of a process. Storage occurs at any time the intermediate is placed in equipment used solely for storage. The storage equipment is part of the MCPU that produces the isolated intermediate and is not assigned as specified in § 63.2435(d).

*Large control device* means a control device that controls total HAP emissions of greater than or equal to 10 tpy, before control.

*Loading rack* means a single system used to fill tank trucks and railcars at a single geographic site. Loading equipment and operations that are physically separate (*i.e.*, do not share common piping, valves, and other equipment) are considered to be separate loading racks.

*Maintenance wastewater* means wastewater generated by the draining of process fluid from components in the MCPU into an individual drain system in preparation for 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 wastewater include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of pumps into an individual drain system, and draining of portions of the MCPU for repair. Wastewater from routine cleaning operations occurring as part of batch operations is not considered maintenance wastewater.

*Maximum true vapor pressure* has the meaning given in § 63.111, except that it applies to all HAP rather than only organic HAP.

*Miscellaneous organic chemical manufacturing process* means all equipment which collectively function to produce a product or isolated intermediate that are materials described in § 63.2435(b). For the purposes of this subpart, process includes any, all or a combination of reaction, recovery, separation, purification, or other activity, operation, manufacture, or treatment which are used to produce a product or isolated intermediate. A process is also defined by the following:

(1) Routine cleaning operations conducted as part of batch operations are considered part of the process;

(2) Each nondedicated solvent recovery operation is considered a single process;

(3) Each nondedicated formulation operation is considered a single process that is used to formulate numerous materials and/or products;

(4) Quality assurance/quality control laboratories are not considered part of any process;  
and

(5) Ancillary activities are not considered a process or part of any process.

(6) The end of a process that produces a solid material is either up to and including the dryer or extruder, or for a polymer production process without a dryer or extruder, it is up to and including the die plate or solid-state reactor, except in two cases. If the dryer, extruder, die plate,

or solid-state reactor is followed by an operation that is designed and operated to remove HAP solvent or residual HAP monomer from the solid, then the solvent removal operation is the last step in the process. If the dried solid is diluted or mixed with a HAP-based solvent, then the solvent removal operation is the last step in the process.

*Nondedicated solvent recovery operation* means a distillation unit or other purification equipment that receives used solvent from more than one MCPU.

*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.

*On-site or on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source or MCPU to which the records pertain, or storage in central files elsewhere at the major source.

*Operating scenario* means, for the purposes of reporting and recordkeeping, any specific operation of an MCPU as described by records specified in § 63.2525(b).

*Organic group* means structures that contain primarily carbon, hydrogen, and oxygen atoms.

*Organic peroxides* means organic compounds containing the bivalent -o-o-structure which may be considered to be a structural derivative of hydrogen peroxide where one or both of the hydrogen atoms has been replaced by an organic radical.

*Point of determination* means each point where process wastewater exits the MCPU or control device.

Note to definition for point of determination:

The regulation allows determination of the characteristics of a wastewater stream: At the point of determination; or downstream of the point of determination if corrections are made for changes in flow rate and annual average concentration of soluble HAP and partially soluble HAP compounds as determined according to procedures in § 63.144 of subpart G in this part 63. Such changes include losses by air emissions; reduction of annual average concentration or changes in flow rate by mixing with other water or wastewater streams; and reduction in flow rate or annual average concentration by treating or otherwise handling the wastewater stream to remove or destroy HAP.

*Predominant HAP* means as used in calibrating an analyzer, the single organic HAP that constitutes the largest percentage of the total organic HAP in the analyzed gas stream, by volume.

*Pressure release* means the emission of materials resulting from the system pressure being greater than the set pressure of the pressure relief device. This release can be one release or a series of releases over a short time period.

*Pressure relief device* means a valve, rupture disk, or similar device used only to release an unplanned, nonroutine discharge of gas from process equipment in order to avoid safety hazards or equipment damage. A pressure relief device discharge can result from an operator error, a malfunction such as a power failure or equipment failure, or other unexpected cause. Such devices include conventional, spring-actuated relief valves, balanced bellows relief valves, pilot-operated relief valves, rupture disks, and breaking, buckling, or shearing pin devices.

Devices that are actuated either by a pressure of less than or equal to 2.5 pounds per square inch gauge or by a vacuum are not pressure relief devices.

*Pressure vessel* means a storage 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 condenser* means a condenser whose primary purpose is to recover material as an integral part of an MCPU. All condensers recovering condensate from an MCPU 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 MCPU 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, or
- (2) To remove water vapor that would negatively affect the adsorption capacity of carbon in a downstream carbon adsorber, or
- (3) To remove high molecular weight organic compounds or other organic compounds that would be difficult to remove during regeneration of a downstream carbon adsorber.

*Process tank* means a tank or vessel that is used within a process to collect material discharged from a feedstock storage tank or equipment within the process before the material is transferred to other equipment within the process or a product storage tank. A process tank has emissions that are related to the characteristics of the batch cycle, and it does not accumulate product over multiple batches. Surge control vessels and bottoms receivers are not process tanks.

*Production-indexed HAP consumption factor (HAP factor)* means the result of dividing the annual consumption of total HAP by the annual production rate, per process.

*Production-indexed VOC consumption factor (VOC factor)* means the result of dividing the annual consumption of total VOC by the annual production rate, per process.

*Quaternary ammonium compounds* means a type of organic nitrogen compound in which the molecular structure includes a central nitrogen atom joined to four organic groups as well as an acid radical of some sort.

*Recovery device* means an individual unit of equipment used for the purpose of recovering chemicals from process vent streams and from wastewater streams for fuel value (*i.e.*, net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. For the purposes of meeting requirements in table 2 to this subpart, the recovery device must not be a process condenser and must recover chemicals to be reused in a process on site. Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. To be a recovery device for a wastewater stream, a decanter and any other equipment based on the operating principle of gravity separation must receive only multi-phase liquid streams.

*Relief valve* means a type of pressure relief device that is designed to re-close after the pressure relief.

*Responsible official* means responsible official as defined in 40 CFR 70.2.

*Safety device* means a closure device such as a pressure relief valve, frangible disc, fusible plug, or any other type of device which functions exclusively to prevent physical damage or permanent deformation to a unit or its air emission control equipment by venting gases or

vapors directly to the atmosphere during unsafe conditions resulting from an unplanned, accidental, or emergency event. For the purposes of this subpart, a safety device is not used for routine venting of gases or vapors from the vapor headspace underneath a cover such as during filling of the unit or to adjust the pressure in response to normal daily diurnal ambient temperature fluctuations. A safety device is designed to remain in a closed position during normal operations and open only when the internal pressure, or another relevant parameter, exceeds the device threshold setting applicable to the air emission control equipment as determined by the owner or operator based on manufacturer recommendations, applicable regulations, fire protection and prevention codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

*Shutdown* means the cessation of operation of a continuous operation for any purpose.

Shutdown also means the cessation of a batch operation, or any related individual piece of equipment required or used to comply with this subpart, if the steps taken to cease operation differ from those described in a standard batch or nonstandard batch. Shutdown also applies to emptying and degassing storage vessels. Shutdown does not apply to cessation of batch operations at the end of a campaign or between batches within a campaign when the steps taken are routine operations.

*Small control device* means a control device that controls total HAP emissions of less than 10 tpy, before control.

*Standard batch* means a batch process operated within a range of operating conditions that are documented in an operating scenario. Emissions from a standard batch are based on the operating conditions that result in highest emissions. The standard batch defines the uncontrolled and controlled emissions for each emission episode defined under the operating scenario.

*Startup* means the setting in operation of a continuous operation for any purpose; the first time a new or reconstructed batch operation begins production; for new equipment added, including equipment required or used to comply with this subpart, the first time the equipment is put into operation; or for the introduction of a new product/process, the first time the product or process is run in equipment. For batch operations, startup applies to the first time the equipment is put into operation at the start of a campaign to produce a product that has been produced in the past if the steps taken to begin production differ from those specified in a standard batch or nonstandard batch. Startup does not apply when the equipment is put into operation as part of a batch within a campaign when the steps taken are routine operations.

*Storage tank* means a tank or other vessel that is used to store liquids that contain organic HAP and/or hydrogen halide and halogen HAP and that has been assigned to an MCPU according to the procedures in § 63.2435(d). The following are not considered storage tanks for the purposes of this subpart:

- (1) Vessels permanently attached to motor vehicles such as trucks, railcars, barges, or ships;
- (2) Pressure vessels designed to operate in excess of 204.9 kilopascals and without emissions to the atmosphere;
- (3) Vessels storing organic liquids that contain HAP only as impurities;
- (4) Wastewater storage tanks;
- (5) Bottoms receivers;
- (6) Surge control vessels; and
- (7) Process tanks.

*Supplemental gases* 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 gases. Air required to operate combustion device burner(s) is not considered supplemental gases.

*Surge control vessel* means feed drums, recycle drums, and intermediate vessels as part of any continuous operation. Surge control vessels are used within an MCPU when in-process storage, mixing, or management of flowrates or volumes is needed to introduce material into continuous operations.

*Thermal expansion relief valve* means a pressure relief valve designed to protect equipment from excess pressure due to thermal expansion of blocked liquid-filled equipment or piping due to ambient heating or heat from a heat tracing system. Pressure relief valves designed to protect equipment from excess pressure due to blockage against a pump or compressor or due to fire contingency are not thermal expansion relief valves.

*Total organic compounds or (TOC)* means the total gaseous organic compounds (minus methane and ethane) in a vent stream.

*Transfer rack* means the collection of loading arms and loading hoses, at a single loading rack, that are assigned to an MCPU according to the procedures specified in § 63.2435(d) and are used to fill tank trucks and/or rail cars with organic liquids that contain one or more of the organic HAP listed in section 112(b) of the CAA of this subpart. Transfer rack includes the associated pumps, meters, shutoff valves, relief valves, and other piping and valves.

*Unit operation* means those processing steps that occur within distinct equipment that are used, among other things, to prepare reactants, facilitate reactions, separate and purify products, and recycle materials. Equipment used for these purposes includes, but is not limited to, reactors,

distillation columns, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

*Waste management* unit means the equipment, structure(s), and/or device(s) used to convey, store, treat, or dispose of wastewater streams or residuals. Examples of waste management units include wastewater tanks, air flotation units, surface impoundments, containers, oil-water or organic-water separators, individual drain systems, biological wastewater treatment units, waste incinerators, and organic removal devices such as steam and air stripper units, and thin film evaporation units. If such equipment is being operated as a recovery device, then it is part of a miscellaneous organic chemical manufacturing process and is not a waste management unit.

*Wastewater* means water that is discarded from an MCPU or control device through a POD and that contains either: an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 5 ppmw and has an annual average flowrate of 0.02 liters per minute or greater; or an annual average concentration of compounds in tables 8 and 9 to this subpart of at least 10,000 ppmw at any flowrate. Wastewater means process wastewater or 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 paragraph (i).

*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 CAA.

**TABLE 1 TO SUBPART FFFF OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR CONTINUOUS PROCESS VENTS**

As required in § 63.2455, you must meet each emission limit and work practice standard in the following table that applies to your continuous process vents:

For each . . .	For which . . .	Then you must . . .
1. Group 1 continuous process vent	a. Not applicable	i. Reduce emissions of total organic HAP by $\geq 98$ percent by weight or to an outlet process concentration $\leq 20$ ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
		ii. Reduce emissions of total organic HAP by venting emissions through a closed vent system to a flare; or
		iii. Use a recovery device to maintain the TRE above 1.9 for an existing source or above 5.0 for a new source.
2. Halogenated Group 1 continuous process vent stream	a. You use a combustion control device to control organic HAP emissions	i. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by $\geq 99$ percent by weight, or to $\leq 0.45$ kg/hr, or to $\leq 20$ ppmv; or
		ii. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to $\leq 0.45$ kg/hr or to a concentration $\leq 20$ ppmv.

3. Group 2 continuous process vent at an existing source	You use a recovery device to maintain the TRE level $>1.9$ but $\leq 5.0$	Comply with the requirements in § 63.2450(e)(4) and the requirements in § 63.993 and the requirements referenced therein.
4. Group 2 continuous process vent at a new source	You use a recovery device to maintain the TRE level $>5.0$ but $\leq 8.0$	Comply with the requirements in § 63.2450(e)(4) and the requirements in § 63.993 and the requirements referenced therein.
5. Continuous process vent	Beginning no later than the compliance dates specified in § 63.2445(i), the continuous process vent contains ethylene oxide such that it is considered to be in ethylene oxide service as defined in § 63.2550	Comply with the applicable emission limits specified in items 1 through 4 of this Table, and also: i. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a flare; or ii. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a control device that reduces ethylene oxide by $\geq 99.9$ percent by weight, or to a concentration $<1$ ppmv for each process vent or to $<5$ pounds per year for all combined process vents.

**TABLE 2 TO SUBPART FFFF OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR BATCH PROCESS VENTS**

As required in § 63.2460, you must meet each emission limit and work practice standard

in the following table that applies to your batch process vents:

For each . . .	Then you must . . .	And you must . . .
1. Process with Group 1 batch process vents	a. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by $\geq 98$ percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of control devices (except a flare); or	Not applicable.
	b. Reduce collective uncontrolled organic HAP emissions from the sum of all batch process vents within the process by $\geq 95$ percent by weight by venting emissions from a sufficient number of the vents through one or more closed-vent systems to any combination of recovery devices	Not applicable.

	or a biofilter, except you may elect to comply with the requirements of subpart WW of this part for any process tank; or	
	c. Reduce uncontrolled organic HAP emissions from one or more batch process vents within the process by venting through a closed-vent system to a flare or by venting through one or more closed-vent systems to any combination of control devices (excluding a flare) that reduce organic HAP to an outlet concentration $\leq 20$ ppmv as TOC or total organic HAP	For all other batch process vents within the process, reduce collective organic HAP emissions as specified in item 1.a and/or item 1.b of this Table.
2. Halogenated Group 1 batch process vent for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion control device; or	i. Reduce overall emissions of hydrogen halide and halogen HAP by $\geq 99$ percent; or ii. Reduce overall emissions of hydrogen halide and halogen HAP to $\leq 0.45$ kg/hr; or iii. Reduce overall emissions of hydrogen halide and halogen HAP to a concentration $\leq 20$ ppmv.
	b. Use a halogen reduction device before the combustion control device	Reduce the halogen atom mass emission rate to $\leq 0.45$ kg/hr or to a concentration $\leq 20$ ppmv.
3. Batch process vent that contains ethylene oxide such that it is considered to be in ethylene oxide service as defined in § 63.2550	Beginning no later than the compliance dates specified in § 63.2445(i), comply with the applicable emission limits specified in items 1 and 2 of this Table, and also: i. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a flare; or ii. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a control device that reduces ethylene oxide by $\geq 99.9$ percent by weight, or to a concentration $< 1$ ppmv for each process vent or to $< 5$ pounds per year for all combined process vents.	Not applicable.

**TABLE 3 TO SUBPART FFFF OF PART 63—EMISSION LIMITS FOR HYDROGEN HALIDE AND HALOGEN HAP EMISSIONS OR HAP METALS EMISSIONS FROM PROCESS VENTS**

As required in § 63.2465, you must meet each emission limit in the following table that applies to your process vents that contain hydrogen halide and halogen HAP emissions or PM HAP emissions:

<b>For each . . .</b>	<b>You must . . .</b>
1. Process with uncontrolled hydrogen halide and halogen HAP emissions from process vents $\geq 1,000$ lb/yr	a. Reduce collective hydrogen halide and halogen HAP emissions by $\geq 99$ percent by weight or to an outlet concentration $\leq 20$ ppmv by venting through one or more closed-vent systems to any combination of control devices, or
	b. Reduce the halogen atom mass emission rate from the sum of all batch process vents and each individual continuous process vent to $\leq 0.45$ kg/hr by venting through one or more closed-vent systems to a halogen reduction device.
2. Process at a new source with uncontrolled emissions from process vents $\geq 150$ lb/yr of HAP metals	Reduce overall emissions of HAP metals by $\geq 97$ percent by weight.

**TABLE 4 TO SUBPART FFFF OF PART 63—EMISSION LIMITS FOR STORAGE TANKS**

As required in § 63.2470, you must meet each emission limit in the following table that applies to your storage tanks:

<b>For each . . .</b>	<b>For which . . .</b>	<b>Then you must . . .</b>
1. Group 1 storage tank	a. The maximum true vapor pressure of total HAP at the storage temperature is $\geq 76.6$ kilopascals	i. Reduce total HAP emissions by $\geq 95$ percent by weight or to $\leq 20$ ppmv of TOC or organic HAP and $\leq 20$ ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		ii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iii. Comply with the requirements in § 63.2450(e)(4), as applicable; and reduce

		total HAP emissions by venting emissions to a fuel gas system or process in accordance with § 63.982(d) and the requirements referenced therein. <sup>1</sup>
	b. The maximum true vapor pressure of total HAP at the storage temperature is <76.6 kilopascals	i. Comply with the requirements of subpart WW of this part, except as specified in § 63.2470; or
		ii. Reduce total HAP emissions by ≥95 percent by weight or to ≤20 ppmv of TOC or organic HAP and ≤20 ppmv of hydrogen halide and halogen HAP by venting emissions through a closed vent system to any combination of control devices (excluding a flare); or
		iii. Reduce total organic HAP emissions by venting emissions through a closed vent system to a flare; or
		iv. Comply with the requirements in § 63.2450(e)(4), as applicable; and reduce total HAP emissions by venting emissions to a fuel gas system or process in accordance with § 63.982(d) and the requirements referenced therein. <sup>1</sup>
2. Halogenated vent stream from a Group 1 storage tank	You use a combustion control device to control organic HAP emissions	Meet one of the emission limit options specified in Item 2.a.i or ii. in Table 1 to this subpart.
3. Storage tank of any capacity and vapor pressure	Beginning no later than the compliance dates specified in § 63.2445(i), the stored liquid contains ethylene oxide such that the storage tank is considered to be in ethylene oxide service as defined in § 63.2550	Comply with the applicable emission limits specified in items 1 and 2 of this Table, and also: i. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a flare; or ii. Reduce emissions of ethylene oxide by venting emissions through a closed-vent system to a control device that reduces ethylene oxide by ≥99.9 percent by weight, or to a concentration <1 ppmv for each storage tank vent.

<sup>1</sup> Beginning no later than the compliance dates specified in § 63.2445(g), any flare using fuel gas from a fuel gas system, of which 50 percent or more of the fuel gas is derived from an MCPU that has processes and/or equipment in ethylene oxide service or that produces olefins or

polyolefins, as determined on an annual average basis, must be in compliance with § 63.2450(e)(5). For purposes of compliance, an MCPU that “produces olefins or polyolefins” includes only those MCPUs that manufacture ethylene, propylene, polyethylene, and/or polypropylene as a product. By-products and impurities as defined in § 63.101, as well as wastes and trace contaminants, are not considered products.

**TABLE 5 TO SUBPART FFFF OF PART 63—EMISSION LIMITS AND WORK PRACTICE STANDARDS FOR TRANSFER RACKS**

As required in § 63.2475, you must meet each emission limit and work practice standard in the following table that applies to your transfer racks:

<b>For each . . .</b>	<b>You must . . .</b>
1. Group 1 transfer rack	a. Reduce emissions of total organic HAP by $\geq 98$ percent by weight or to an outlet concentration $\leq 20$ ppmv as organic HAP or TOC by venting emissions through a closed-vent system to any combination of control devices (except a flare); or
	b. Reduce emissions of total organic HAP by venting emissions through a closed-vent system to a flare; or
	c. Comply with the requirements in § 63.2450(e)(4), as applicable; and reduce emissions of total organic HAP by venting emissions to a fuel gas system or process in accordance with § 63.982(d) and the requirements referenced therein; <sup>1</sup> or
	d. Use a vapor balancing system designed and operated to collect organic HAP vapors displaced from tank trucks and railcars during loading and route the collected HAP vapors to the storage tank from which the liquid being loaded originated or to another storage tank connected by a common header.
2. Halogenated Group 1 transfer rack vent stream for which you use a combustion device to control organic HAP emissions	a. Use a halogen reduction device after the combustion device to reduce emissions of hydrogen halide and halogen HAP by $\geq 99$ percent by weight, to $\leq 0.45$ kg/hr, or to $\leq 20$ ppmv; or b. Use a halogen reduction device before the combustion device to reduce the halogen atom mass emission rate to $\leq 0.45$ kg/hr or to a concentration $\leq 20$ ppmv.

<sup>1</sup> Beginning no later than the compliance dates specified in § 63.2445(g), any flare using fuel gas from a fuel gas system, of which 50 percent or more of the fuel gas is derived from an MCPU that has processes and/or equipment in ethylene oxide service or that produces olefins or polyolefins, as determined on an annual average basis, must be in compliance with § 63.2450(e)(5). For purposes of compliance, an MCPU that “produces olefins or polyolefins” includes only those MCPUs that manufacture ethylene, propylene, polyethylene, and/or

polypropylene as a product. By-products and impurities as defined in § 63.101, as well as wastes and trace contaminants, are not considered products.

**TABLE 6 TO SUBPART FFFF OF PART 63—REQUIREMENTS FOR EQUIPMENT LEAKS**

As required in § 63.2480, you must meet each requirement in the following table that applies to your equipment leaks:

For all . . .	And that is part of . . .	You must . . .
1. Equipment that is in organic HAP service	a. Any MCPU	i. Comply with the requirements of subpart UU of this part and the requirements referenced therein, except as specified in § 63.2480(b) and (d) through (f); or
		ii. Comply with the requirements of subpart H of this part and the requirements referenced therein, except as specified in § 63.2480(b) and (d) through (f); or
		iii. Comply with the requirements of 40 CFR part 65, subpart F, and the requirements referenced therein, except as specified in § 63.2480(c), and (d) through (f).
2. Equipment that is in organic HAP service at a new source	a. Any MCPU	i. Comply with the requirements of subpart UU of this part and the requirements referenced therein, except as specified in § 63.2480(b)(6) and (7), (e), and (f); or
		ii. Comply with the requirements of 40 CFR part 65, subpart F, except as specified in § 63.2480(c)(10) and (11), (e), and (f).
3. Equipment that is in ethylene oxide service as defined in § 63.2550	a. Any MCPU	i. Beginning no later than the compliance dates specified in § 63.2445(i), comply with the requirements of subpart UU of this part and the requirements referenced therein, except as specified in § 63.2493(d) and (e); or
		ii. Beginning no later than the compliance dates specified in § 63.2445(i), comply with the requirements of subpart H of this part and the requirements referenced therein, except as specified in § 63.2493(d) and (e);
		iii. Beginning no later than the compliance dates specified in § 63.2445(i), comply with the requirements of 40 CFR part 65, subpart F, and the requirements referenced therein, except as specified in § 63.2493(d) and (e).

**TABLE 7 TO SUBPART FFFF OF PART 63—REQUIREMENTS FOR WASTEWATER STREAMS AND LIQUID STREAMS IN OPEN SYSTEMS WITHIN AN MCPU**

As required in § 63.2485, you must meet each requirement in the following table that

applies to your wastewater streams and liquid streams in open systems within an MCPU:

<b>For each . . .</b>	<b>You must . . .</b>
1. Process wastewater stream	Comply with the requirements in §§ 63.132 through 63.148 and the requirements referenced therein, except as specified in § 63.2485.
2. Maintenance wastewater stream	Comply with the requirements in § 63.105 and the requirements referenced therein, except as specified in § 63.2485.
3. Liquid streams in an open system within an MCPU	Comply with the requirements in § 63.149 and the requirements referenced therein, except as specified in § 63.2485.

**TABLE 8 TO SUBPART FFFF OF PART 63—PARTIALLY SOLUBLE HAZARDOUS AIR POLLUTANTS**

As specified in § 63.2485, the partially soluble HAP in wastewater that are subject to management and treatment requirements in this subpart FFFF are listed in the following table:

<b>Chemical name . . .</b>	<b>CAS No.</b>
1. 1,1,1-Trichloroethane (methyl chloroform)	71556
2. 1,1,2,2-Tetrachloroethane	79345
3. 1,1,2-Trichloroethane	79005
4. 1,1-Dichloroethylene (vinylidene chloride)	75354
5. 1,2-Dibromoethane	106934
6. 1,2-Dichloroethane (ethylene dichloride)	107062
7. 1,2-Dichloropropane	78875
8. 1,3-Dichloropropene	542756
9. 2,4,5-Trichlorophenol	95954
10. 1,4-Dichlorobenzene	106467
11. 2-Nitropropane	79469
12. 4-Methyl-2-pentanone (MIBK)	108101
13. Acetaldehyde	75070
14. Acrolein	107028
15. Acrylonitrile	107131
16. Allyl chloride	107051
17. Benzene	71432
18. Benzyl chloride	100447

19. Biphenyl	92524
20. Bromoform (tribromomethane)	75252
21. Bromomethane	74839
22. Butadiene	106990
23. Carbon disulfide	75150
24. Chlorobenzene	108907
25. Chloroethane (ethyl chloride)	75003
26. Chloroform	67663
27. Chloromethane	74873
28. Chloroprene	126998
29. Cumene	98828
30. Dichloroethyl ether	111444
31. Dinitrophenol	51285
32. Epichlorohydrin	106898
33. Ethyl acrylate	140885
34. Ethylbenzene	100414
35. Ethylene oxide	75218
36. Ethylidene dichloride	75343
37. Hexachlorobenzene	118741
38. Hexachlorobutadiene	87683
39. Hexachloroethane	67721
40. Methyl methacrylate	80626
41. Methyl-t-butyl ether	1634044
42. Methylene chloride	75092
43. N-hexane	110543
44. N,N-dimethylaniline	121697
45. Naphthalene	91203
46. Phosgene	75445
47. Propionaldehyde	123386
48. Propylene oxide	75569
49. Styrene	100425
50. Tetrachloroethylene (perchloroethylene)	127184
51. Tetrachloromethane (carbon tetrachloride)	56235
52. Toluene	108883
53. Trichlorobenzene (1,2,4-)	120821
54. Trichloroethylene	79016
55. Trimethylpentane	540841
56. Vinyl acetate	108054
57. Vinyl chloride	75014
58. Xylene (m)	108383
59. Xylene (o)	95476
60. Xylene (p)	106423

**TABLE 9 TO SUBPART FFFF OF PART 63—SOLUBLE HAZARDOUS AIR POLLUTANTS**

As specified in § 63.2485, the soluble HAP in wastewater that are subject to management and treatment requirements of this subpart FFFF are listed in the following table:

Chemical name . . .	CAS No.
1. Acetonitrile	75058
2. Acetophenone	98862
3. Diethyl sulfate	64675
4. Dimethyl hydrazine (1,1)	57147
5. Dimethyl sulfate	77781
6. Dinitrotoluene (2,4)	121142
7. Dioxane (1,4)	123911
8. Ethylene glycol dimethyl ether	110714
9. Ethylene glycol monobutyl ether acetate	112072
10. Ethylene glycol monomethyl ether acetate	110496
11. Isophorone	78591
12. Methanol	67561
13. Nitrobenzene	98953
14. Toluidine (o-)	95534
15. Triethylamine	121448

**TABLE 10 TO SUBPART FFFF OF PART 63—WORK PRACTICE STANDARDS FOR HEAT EXCHANGE SYSTEMS**

As required in § 63.2490, you must meet each requirement in the following table that applies to your heat exchange systems:

For each . . .	You must . . .
Heat exchange system, as defined in § 63.101	a. Comply with the requirements of § 63.104 and the requirements referenced therein, except as specified in § 63.2490(b) and (c); or
	b. Comply with the requirements in § 63.2490(d); <u>or</u>
	<u>c. Comply with the requirements in § 63.2490(e).</u>

**TABLE 11 TO SUBPART FFFF OF PART 63—REQUIREMENTS FOR REPORTS**

As required in § 63.2520(a) and (b), you must submit each report that applies to you on the schedule shown in the following table:

You must submit a(n)	The report must contain . . .	You must submit the report . . .
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1. Precompliance report	The information specified in § 63.2520(c)	At least 6 months prior to the compliance date; or for new sources, with the application for approval of construction or reconstruction.
2. Notification of compliance status report	The information specified in § 63.2520(d)	No later than 150 days after the compliance date specified in § 63.2445.
3. Compliance report	The information specified in § 63.2520(e)	Semiannually according to the requirements in § 63.2520(b).

**TABLE 12 TO SUBPART FFFF OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART FFFF**

As specified in § 63.2540, the parts of the General Provisions that apply to you are shown

in the following table:

<b>Citation</b>	<b>Subject</b>	<b>Explanation</b>
§ 63.1	Applicability	Yes.
§ 63.2	Definitions	Yes.
§ 63.3	Units and Abbreviations	Yes.
§ 63.4	Prohibited Activities	Yes.
§ 63.5	Construction/Reconstruction	Yes.
§ 63.6(a)	Applicability	Yes.
§ 63.6(b)(1)-(4)	Compliance Dates for New and Reconstructed sources	Yes.
§ 63.6(b)(5)	Notification	Yes.
§ 63.6(b)(6)	[Reserved]	
§ 63.6(b)(7)	Compliance Dates for New and Reconstructed Area Sources That Become Major	Yes.
§ 63.6(c)(1)-(2)	Compliance Dates for Existing Sources	Yes.
§ 63.6(c)(3)-(4)	[Reserved]	
§ 63.6(c)(5)	Compliance Dates for Existing Area Sources That Become Major	Yes.
§ 63.6(d)	[Reserved]	
§ 63.6(e)(1)(i)	Operation & Maintenance	Yes, before August 12, 2023. No, beginning on and after August 12, 2023. See § 63.2450(u) for general duty requirement.
§ 63.6(e)(1)(ii)	Operation & Maintenance	Yes, before August 12, 2023. No, beginning on and after August 12, 2023.

§ 63.6(e)(1)(iii)	Operation & Maintenance	Yes.
§ 63.6(e)(2)	[Reserved]	
§ 63.6(e)(3)(i), (iii), and (v) through (viii)	Startup, Shutdown, Malfunction Plan (SSMP)	Yes, before August 12, 2023, except information regarding Group 2 emission points and equipment leaks is not required in the SSMP, as specified in § 63.2525(j). No, beginning on and after August 12, 2023.
§ 63.6(e)(3)(iii) and (iv)	Recordkeeping and Reporting During SSM	No, see § 63.2525 for recordkeeping requirements and § 63.2520(e)(4) for reporting requirements.
§ 63.6(e)(3)(ix)	SSMP incorporation into title V permit	Yes, before August 12, 2023. No beginning on and after August 12, 2023.
§ 63.6(f)(1)	Compliance With Non-Opacity Standards Except During SSM	No. See § 63.2445(g) through (i).
§ 63.6(f)(2)-(3)	Methods for Determining Compliance	Yes.
§ 63.6(g)(1)-(3)	Alternative Standard	Yes.
§ 63.6(h)(1)	Compliance with Opacity Standards Except During SSM	No. See § 63.2445(g) through (i).
§ 63.6(h)(2)-(9)	Opacity/Visible Emission (VE) Standards	Only for flares for which Method 22 of 40 CFR part 60, appendix A-7, observations are required as part of a flare compliance assessment.
§ 63.6(i)(1)-(14), and (16)	Compliance Extension	Yes.
§ 63.6(j)	Presidential Compliance Exemption	Yes.
§ 63.7(a)(1)-(2)	Performance Test Dates	Yes, except substitute 150 days for 180 days.
§ 63.7(a)(3)	Section 114 Authority	Yes, and this paragraph also applies to flare compliance assessments as specified under § 63.997(b)(2).
§ 63.7(a)(4)	Force Majeure	Yes.
§ 63.7(b)(1)	Notification of Performance Test	Yes.
§ 63.7(b)(2)	Notification of Rescheduling	Yes.
§ 63.7(c)	Quality Assurance/Test Plan	Yes, except the test plan must be submitted with the notification of the performance test if the control device controls batch process vents.
§ 63.7(d)	Testing Facilities	Yes.
§ 63.7(e)(1)	Conditions for Conducting Performance Tests	Yes, before August 12, 2023 except that performance tests for batch process vents must be conducted

		under worst-case conditions as specified in § 63.2460. No, beginning on and after August 12, 2023. See § 63.2450(g)(6).
§ 63.7(e)(2)	Conditions for Conducting Performance Tests	Yes.
§ 63.7(e)(3)	Test Run Duration	Yes.
§ 63.7(e)(4)	Administrator's Authority to Require Testing	Yes.
§ 63.7(f)	Alternative Test Method	Yes.
§ 63.7(g)	Performance Test Data Analysis	Yes, except this subpart specifies how and when the performance test and performance evaluation results are reported.
§ 63.7(h)	Waiver of Tests	Yes.
§ 63.8(a)(1)	Applicability of Monitoring Requirements	Yes.
§ 63.8(a)(2)	Performance Specifications	Yes.
§ 63.8(a)(3)	[Reserved]	
§ 63.8(a)(4)	Monitoring with Flares	Yes, except for flares subject to § 63.2450(e)(5).
§ 63.8(b)(1)	Monitoring	Yes.
§ 63.8(b)(2)-(3)	Multiple Effluents and Multiple Monitoring Systems	Yes.
§ 63.8(c)(1)	Monitoring System Operation and Maintenance	Yes.
§ 63.8(c)(1)(i)	Routine and Predictable SSM	Yes, before August 12, 2023. No, beginning on and after August 12, 2023.
§ 63.8(c)(1)(ii)	CMS malfunction not in SSM plan	Yes.
§ 63.8(c)(1)(iii)	Compliance with Operation and Maintenance Requirements	Yes, before August 12, 2023. No, beginning on and after August 12, 2023.
§ 63.8(c)(2)-(3)	Monitoring System Installation	Yes.
§ 63.8(c)(4)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of this part. Requirements for COMS do not apply because this subpart does not require continuous opacity monitoring systems (COMS).
§ 63.8(c)(4)(i)	COMS Measurement and Recording Frequency	No; this subpart does not require COMS.
§ 63.8(c)(4)(ii)	CEMS Measurement and Recording Frequency	Yes.

§ 63.8(c)(5)	COMS Minimum Procedures	No. This subpart does not contain opacity or VE limits.
§ 63.8(c)(6)	CMS Requirements	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part. Requirements for COMS do not apply because this subpart does not require COMS.
§ 63.8(c)(7)-(8)	CMS Requirements	Only for CEMS. Requirements for CPMS are specified in referenced subparts G and SS of this part. Requirements for COMS do not apply because this subpart does not require COMS.
§ 63.8(d)(1)	CMS Quality Control	Only for CEMS.
§ 63.8(d)(2)	CMS Quality Control	Only for CEMS.
§ 63.8(d)(3)	CMS Quality Control	Yes, only for CEMS before August 12, 2023. No, beginning on and after August 12, 2023. See § 63.2450(j)(6).
§ 63.8(e)	CMS Performance Evaluation	Only for CEMS, except this subpart specifies how and when the performance evaluation results are reported. Section 63.8(e)(5)(ii) does not apply because this subpart does not require COMS.
§ 63.8(f)(1)-(5)	Alternative Monitoring Method	Yes, except you may also request approval using the precompliance report.
§ 63.8(f)(6)	Alternative to Relative Accuracy Test	Only applicable when using CEMS to demonstrate compliance, including the alternative standard in § 63.2505.
§ 63.8(g)(1)-(4)	Data Reduction	Only when using CEMS, including for the alternative standard in § 63.2505, except that the requirements for COMS do not apply because this subpart has no opacity or VE limits, and § 63.8(g)(2) does not apply because data reduction requirements for CEMS are specified in § 63.2450(j).
§ 63.8(g)(5)	Data Reduction	No. Requirements for CEMS are specified in § 63.2450(j). Requirements for CPMS are specified in referenced subparts G and SS of this part.
§ 63.9(a)	Notification Requirements	Yes.

§ 63.9(b)(1)-(5)	Initial Notifications	Yes.
§ 63.9(c)	Request for Compliance Extension	Yes.
§ 63.9(d)	Notification of Special Compliance Requirements for New Source	Yes.
§ 63.9(e)	Notification of Performance Test	Yes.
§ 63.9(f)	Notification of VE/Opacity Test	No.
§ 63.9(g)	Additional Notifications When Using CMS	Only for CEMS. Section 63.9(g)(2) does not apply because this subpart does not require COMS.
63.9(h)(1)-(6)	Notification of Compliance Status	Yes, except § 63.9(h)(2)(i)(A) through (G) and (h)(2)(ii) do not apply because § 63.2520(d) specifies the required contents and due date of the notification of compliance status report.
§ 63.9(i)	Adjustment of Submittal Deadlines	Yes.
§ 63.9(j)	Change in previous information	Yes, for change in major source status, otherwise § 63.2520(e) specifies reporting requirements for process changes.
§ 63.9(k)	Electronic reporting procedures	Yes, <del>as specified in § 63.9(j).</del>
§ 63.10(a)	Recordkeeping/Reporting	Yes.
§ 63.10(b)(1)	Recordkeeping/Reporting	Yes.
§ 63.10(b)(2)(i)	Records related to startup and shutdown	No, see §§ 63.2450(e) and 63.2525 for recordkeeping requirements.
§ 63.10(b)(2)(ii)	Recordkeeping relevant to SSM periods and CMS	Yes, before August 12, 2023. No, beginning on and after August 12, 2023. See § 63.2525(h) and (l).
§ 63.10(b)(2)(iii)	Records related to maintenance of air pollution control equipment	Yes.
§ 63.10(b)(2)(iv) and (v)	Recordkeeping relevant to SSM period	Yes, before August 12, 2023. No, beginning on and after August 12, 2023.
§ 63.10(b)(2)(vi)	CMS Records	Before August 12, 2023, yes but only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part. Beginning on and after August 12, 2023, yes for CEMS and CPMS for flares subject to § 63.2450(e)(5).

§ 63.10(b)(2)(x) and (xi)	CMS Records	Only for CEMS; requirements for CPMS are specified in referenced subparts G and SS of this part.
§ 63.10(b)(2)(vii)-(ix)	Records	Yes.
§ 63.10(b)(2)(xii)	Records	Yes.
§ 63.10(b)(2)(xiii)	Records	Only for CEMS.
§ 63.10(b)(2)(xiv)	Records	Yes.
§ 63.10(b)(3)	Records	Yes.
§ 63.10(c)(1)-(6),(9)-(14)	Records	Only for CEMS. Recordkeeping requirements for CPMS are specified in referenced subparts G and SS of this part.
§ 63.10(c)(7)-(8)	Records	No. Recordkeeping requirements are specified in § 63.2525.
§ 63.10(c)(15)	Records	Yes, before August 12, 2023, but only for CEMS. No, beginning on and after August 12, 2023.
§ 63.10(d)(1)	General Reporting Requirements	Yes.
§ 63.10(d)(2)	Report of Performance Test Results	Yes, before October 13, 2020. No, beginning on and after October 13, 2020.
§ 63.10(d)(3)	Reporting Opacity or VE Observations	No.
§ 63.10(d)(4)	Progress Reports	Yes.
§ 63.10(d)(5)(i)	Periodic Startup, Shutdown, and Malfunction Reports	No, § 63.2520(e)(4) and (5) specify the SSM reporting requirements.
§ 63.10(d)(5)(ii)	Immediate SSM Reports	No.
§ 63.10(e)(1)	Additional CEMS Reports	Yes.
§ 63.10(e)(2)(i)	Additional CMS Reports	Only for CEMS, except this subpart specifies how and when the performance evaluation results are reported.
§ 63.10(e)(2)(ii)	Additional COMS Reports	No. This subpart does not require COMS.
§ 63.10(e)(3)	Reports	No. Reporting requirements are specified in § 63.2520.
§ 63.10(e)(3)(i)-(iii)	Reports	No. Reporting requirements are specified in § 63.2520.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	No. Reporting requirements are specified in § 63.2520.
§ 63.10(e)(3)(iv)-(v)	Excess Emissions Reports	No. Reporting requirements are specified in § 63.2520.
§ 63.10(e)(3)(vi)-(viii)	Excess Emissions Report and Summary Report	No. Reporting requirements are specified in § 63.2520.
§ 63.10(e)(4)	Reporting COMS data	No.

§ 63.10(f)	Waiver for Recordkeeping/Reporting	Yes.
§ 63.11	Control device requirements for flares and work practice requirements for equipment leaks	Yes, except for flares subject to § 63.2450(e)(5).
§ 63.12	Delegation	Yes.
§ 63.13	Addresses	Yes.
§ 63.14	Incorporation by Reference	Yes.
§ 63.15	Availability of Information	Yes.