

Citation	Requirement	Applies to subpart LLL	Explanation
63.13(a)–(c)	State/Regional Addresses	Yes.	
63.14(a)–(b)	Incorporation by Reference.	Yes.	
63.15(a)–(b)	Availability of Information	Yes.	

[75 FR 55064, Sept. 9, 2010, as amended at 78 FR 10054, Feb. 12, 2013]

Subpart MMM—National Emission Standards for Hazardous Air Pollutants for Pesticide Active Ingredient Production

SOURCE: 64 FR 33589, June 23, 1999, unless otherwise noted.

§ 63.1360 Applicability.

(a) *Definition of affected source.* The affected source subject to this subpart is the facility-wide collection of pesticide active ingredient manufacturing process units (PAI process units) that process, use, or produce HAP, and are located at a plant site that is a major source, as defined in section 112(a) of the CAA. An affected source also includes waste management units, heat exchange systems, and cooling towers that are associated with the PAI process units. Exemptions from an affected source are specified in paragraph (d) of this section.

(b) *New source applicability.* A new affected source subject to this subpart and to which the requirements for new sources apply is defined according to the criteria in paragraph (b)(1) or (2) of this section.

(1) An affected source for which construction or reconstruction commenced after November 10, 1997.

(2) Any dedicated PAI process unit that meets the criteria specified in paragraphs (b)(2)(i) and (ii) of this section.

(i) For which construction, as defined in § 63.1361, commenced after November 10, 1997, or reconstruction commenced after September 20, 2002.

(ii) That has the potential to emit 10 tons/yr of any one HAP or 25 tons/yr of combined HAP.

(c) *General provisions.* Table 1 of this subpart specifies the provisions of subpart A of this part that apply to an owner or operator of an affected source subject to this subpart, and clarifies

specific provisions in subpart A of this part as necessary for this subpart.

(d) *Exemptions from the requirements of this subpart.* The provisions of this subpart do not apply to:

- (1) Research and development facilities;
- (2) PAI process units that are subject to subpart F of this part;
- (3) Production of ethylene;
- (4) Coal tar distillation; and
- (5) The following emission points listed:
 - (i) Storm water from segregated sewers;
 - (ii) Water from fire-fighting and deluge systems, including testing of such systems;
 - (iii) Spills;
 - (iv) Water from safety showers;
 - (v) Noncontact steam boiler blowdown and condensate;
 - (vi) Laundry water;
 - (vii) Vessels storing material that contains no organic HAP or contains organic HAP as impurities only; and
 - (viii) Equipment, as defined in § 63.1363, that is intended to operate in organic HAP service for less than 300 hours during the calendar year.

(e) *Applicability of this subpart.* (1) Each provision set forth in this subpart shall apply at all times except during periods of non-operation of the affected source (or specific portion thereof) resulting in cessation of the emissions to which this subpart applies.

(i) The startup, shutdown, or malfunction precludes the ability of the owner or operator of an affected source to comply with one or more specific emission limitations to which a particular emission point is subject; and

(ii) The owner or operator follows the provisions for periods of startup, shutdown, and malfunction, as specified in §§ 63.1367(a)(3) and 63.1368(i).

(2) The provisions set forth in § 63.1363 shall apply at all times except during periods of nonoperation of the PAI

process unit (or specific portion thereof) in which the lines are drained and depressurized resulting in the cessation of the emissions to which § 63.1363 applies.

(3) The owner or operator shall not shut down items of equipment that are required or utilized for compliance with the emissions limitations of this subpart during times when emissions (or, where applicable, wastewater streams or residuals) are being routed to such items of equipment, if the shut-down would contravene emissions limitations of this subpart applicable to such items of equipment.

(4) *General duty.* At all times, the owner or operator 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 the owner or operator 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.

(f) *Storage vessel applicability determination.* An owner or operator shall follow the procedures specified in paragraphs (f)(1) through (5) of this section to determine whether a storage vessel is part of the affected source to which this subpart applies.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on June 23, 1999, the storage vessel shall belong to the process unit subject to the other subpart.

(2) Unless otherwise excluded under paragraph (f)(1) of this section, the storage vessel is part of a PAI process unit if either the input to the vessel from the PAI process unit is greater than or equal to the input from any other PAI or non-PAI process unit, or the output from the vessel to the PAI

process unit is greater than or equal to the output to any other PAI or non-PAI process unit. If the greatest input to and/or output from a shared storage vessel is the same for two or more process units, including one or more PAI process units, the owner or operator must assign the storage vessel to any one of the PAI process units that meet this condition.

(3) Unless otherwise excluded under paragraph (f)(1) of this section, where a storage vessel is located in a tank farm (including a marine tank farm), the applicability of this subpart shall be determined according to the provisions in paragraphs (f)(3)(i) through (iii) of this section.

(i) The storage vessel in the tank farm is not subject to the provisions of this subpart if the greatest input to or output from the storage vessel is for a non-PAI process unit. The input and output shall be determined among only those process units that share the storage vessel and that do not have an intervening storage vessel for that product (or raw material, as appropriate).

(ii) Except for storage vessels in a tank farm excluded in accordance with paragraph (f)(3)(i) of this section, applicability of this subpart shall be determined according to the provisions in paragraphs (f)(3)(ii)(A) through (C) of this section.

(A) Except as specified in paragraph (f)(3)(ii)(C) of this section, this subpart does not apply to the storage vessel in a tank farm if each PAI process unit that receives material from or sends material to the storage vessel has an intervening storage vessel for that material.

(B) Except as specified in paragraph (f)(3)(ii)(C) of this section, a storage vessel in a tank farm shall be assigned to the PAI process unit that receives the greatest amount of material from or sends the greatest amount of material to the storage vessel and does not have an intervening storage vessel. If two or more PAI process units have the same input to or output from the storage vessel in the tank farm, then the storage vessel in the tank farm may be assigned to any one of the PAI process units that meet this condition.

(C) As an alternative to the requirements specified in paragraphs

(f)(3)(ii)(A) and (B) of this section, even if an intervening storage vessel is present, an owner or operator may elect to assign a storage vessel in a tank farm to the PAI process unit that sends the most material to or receives the most material from the storage vessel. If two or more PAI process units have the same input to or output from the storage vessel in the tank farm, then the storage vessel in the tank farm may be assigned to any one of the PAI process units that meet this condition.

(iii) With respect to a process unit, an intervening storage vessel means a storage vessel connected by hard-piping to the process unit and to the storage vessel in the tank farm so that the product or raw material entering or leaving the process flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(4) If use varies from year to year, then use for the purposes of this subpart for existing sources shall be based on the utilization that occurred during the year preceding June 23, 1999, or if the storage vessel was not in operation during that year, the use shall be based on the expected use in the 5 years after startup. This determination shall be reported as part of an operating permit application or as otherwise specified by the permitting authority.

(5) If the storage vessel begins receiving material from (or sending material to) another process unit, or ceasing to receive material from (or send material to) a PAI process unit, or if there is a significant change in the use of the storage vessel, the owner or operator shall reevaluate the ownership determination for the storage vessel.

(g) *Designating production of an intermediate as a PAI process unit.* Except as specified in paragraph (d) of this section, an owner or operator may elect to designate production of any intermediate that does not meet the definition of integral intermediate as a PAI process unit subject to this subpart. Any storage vessel containing the intermediate is assigned to a PAI process unit according to the procedures in paragraph (f) of this section. Any process tank containing the intermediate is

part of the process unit used to produce the intermediate.

(h) *Applicability of process units included in a process unit group.* An owner or operator may elect to develop process unit groups in accordance with paragraph (h)(1) of this section. For the PAI process units in these process unit groups, the owner or operator may comply with the provisions in overlapping MACT standards, as specified in paragraphs (h)(2) through (4) of this section, as an alternative means of demonstrating compliance with the provisions of this subpart.

(1) Develop, revise, and document changes in a process unit group in accordance with the procedures specified in paragraphs (h)(1)(i) through (vi) of this section.

(i) Initially identify a non-dedicated PAI process unit that is operating on December 23, 2003 or a date after December 23, 2003, and identify all processing equipment that is part of this PAI process unit, based on descriptions in operating scenarios.

(ii) Add to the group any other non-dedicated PAI and non-dedicated non-PAI process units expected to be operated in the 5 years after the date specified in paragraph (h)(1)(i) of this section, provided they satisfy the criteria specified in paragraphs (h)(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 PAI process unit that is added to a group must have some processing equipment that is part of one or more PAI process units that are already in the process unit group.

(B) Each non-PAI process unit that is added to a group must have some processing equipment that is also part of one or more of the PAI process units in the group.

(C) No process unit may be part of more than one process unit group.

(iii) The initial process unit group consists of all of the processing equipment for the process units identified in paragraphs (h)(1)(i) and (ii) of this section.

(iv) If compliance is to be demonstrated in accordance with paragraph (h)(3) of this section, determine

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the primary product of the process unit group according to the procedures specified in paragraphs (h)(1)(iv)(A) through (C) of this section.

(A) The primary product is the type of product (e.g., PAI, pharmaceutical product, thermoplastic resin, etc.) that is expected to be produced for the greatest operating time in the 5-year period specified in paragraph (h)(1)(i) of this section.

(B) If the process unit group produces multiple products equally based on operating time, then the primary product is the product with the greatest production on a mass basis over the 5-year period specified in paragraph (h)(1)(i) of this section.

(C) The primary product of the group must be redetermined if the owner or operator does not intend to make that product in the future or if it has not been made for 5 years. The results of the redetermination must be recorded as specified in § 63.1367(b) and reported in a Periodic report no later than the report covering the period for the end of the 5th year as specified in § 63.1368(g)(2). If the primary product changes, the owner or operator must either demonstrate compliance with the applicable subpart as specified in paragraph (h)(3) of this section or demonstrate compliance with the provisions of this subpart MMM.

(v) Add process units developed in the future in accordance with the conditions specified in paragraphs (h)(1)(ii)(A) through (C) of this section.

(vi) Maintain records of changes in the process units in each process unit group as specified in § 63.1367(b)(9), and maintain reports as specified in § 63.1368(f)(9) and (g)(2)(ix).

(2) If any of the products produced in the process unit group are subject to 40 CFR part 63, subpart GGG (Pharmaceuticals MACT), the owner or operator may elect to comply with the requirements of subpart GGG for the PAI process unit(s) within the process unit group, except for the following:

(i) The emission limit standard for process vents in § 63.1362(b)(2)(i) shall apply in place of § 63.1254(a)(2);

(ii) When the dates of April 2, 1997 and April 2, 2007 are provided in § 63.1254(a)(3)(ii), the dates of November 10, 1997 and November 10, 2007, respec-

tively, shall apply for purposes of this subpart MMM; and

(iii) Requirements in § 63.1367(a)(5) regarding application for approval of construction or reconstruction shall apply in place of the provisions in § 63.1259(a)(5).

(3) If the primary product of a process unit group is determined to be a type of material that is subject to another subpart of 40 CFR part 63 on June 23, 1999 or startup of the first process unit after formation of the process unit group, whichever is later, the owner or operator may elect to comply with the other subpart for any PAI process unit within the process unit group, subject to the requirement in this paragraph (h)(3). Emissions from PAI Group 1 process vents, as defined in § 63.1361, must be reduced in accordance with the control requirements for Group 1 vents as specified in the alternative subpart. The criteria in the alternative subpart for determining which process vents must be controlled do not apply for the purposes of this paragraph (h)(3).

(4) The requirements for new and reconstructed sources in the alternative subpart apply to all PAI process units in the process unit group if, and only if, the affected source under the alternative subpart meets the requirements for construction or reconstruction.

(i) *Overlap with other regulations—(1) Compliance with other MACT standards.*

(i) After the compliance dates specified in § 63.1364, an affected source subject to the provisions of this subpart that is also subject to the provisions of any other subpart of 40 CFR part 63 may elect, to the extent the subparts are consistent, under which subpart to maintain records and report to EPA. The affected source shall identify in the Notification of Compliance Status report required by § 63.1368(f) under which authority such records will be maintained.

(ii) After the compliance dates specified in § 63.1364, at an offsite reloading or cleaning facility subject to § 63.1362(b)(6), compliance with the emission standards and associated initial compliance monitoring, record-keeping, and reporting provisions of any other subpart of 40 CFR part 63 constitutes compliance with the provisions of § 63.1362(b)(6)(vii)(B) or (C). The

owner or operator of the affected storage vessel shall identify in the Notification of Compliance Status report required by § 63.1368(f) the subpart of 40 CFR part 63 with which the owner or operator of the offsite reloading or cleaning facility complies.

(2) *Overlap with RCRA subparts AA, BB, and/or CC.* After the compliance dates specified in § 63.1364, if any affected source subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264, subpart AA, BB, or CC, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265, subpart AA, BB, or CC, and the owner or operator complies with the periodic reporting requirements under 40 CFR part 264, subpart AA, BB, or CC that would apply to the device if the facility had final-permitted status, the owner or operator may elect to comply either with the monitoring, recordkeeping, and reporting requirements of this subpart, or with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, as described in this paragraph, which shall constitute compliance with the monitoring, recordkeeping, and reporting requirements of this subpart. If the owner or operator elects to comply with the monitoring, recordkeeping, and reporting requirements in 40 CFR parts 264 and/or 265, the owner or operator shall report all excursions as required by § 63.1368(g). The owner or operator shall identify in the Notification of Compliance Status report required by § 63.1368(f) the monitoring, recordkeeping, and reporting authority under which the owner or operator will comply.

(3) *Overlap with NSPS subpart Kb.* After the compliance dates specified in § 63.1364, a Group 1 or Group 2 storage vessel that is also subject to the provisions of 40 CFR part 60, subpart Kb, is required to comply only with the provisions of this subpart MMM.

(4) *Overlap with subpart I.* After the compliance dates specified in § 63.1364, for all equipment within a process unit that contains equipment subject to subpart I of this part, an owner or operator may elect to comply with either the provisions of this subpart MMM or the provisions of subpart H of this part.

The owner or operator shall identify in the Notification of Compliance Status report required by § 63.1368(f) the provisions with which the owner or operator elects to comply.

(5) *Overlap with RCRA regulations for wastewater.* After the compliance dates specified in § 63.1364, the owner or operator of an affected wastewater stream that is also subject to provisions in 40 CFR parts 260 through 272 shall comply with the more stringent control requirements (e.g., waste management units, numerical treatment standards, etc.) and the more stringent testing, monitoring, recordkeeping, and reporting requirements that overlap between the provisions of this subpart and the provisions of 40 CFR parts 260 through 272. The owner or operator shall keep a record of the information used to determine which requirements were the most stringent and shall submit this information if requested by the Administrator.

(6) *Overlap with NSPS subparts III, NNN, and RRR.* After the compliance dates specified in § 63.1364, if an owner or operator of a process vent subject to this subpart MMM that is also subject to the provisions of 40 CFR part 60, subpart III, or subpart NNN, or subpart RRR, elects to reduce organic HAP emissions from the process vent by 98 percent as specified in § 63.1362(b)(2)(iii)(A), then the owner or operator is required to comply only with the provisions of this subpart MMM. Otherwise, the owner or operator shall comply with the provisions in both this subpart MMM and the provisions in 40 CFR part 60, subparts III, NNN, and RRR, as applicable.

(j) *Meaning of periods of time.* All terms in this subpart MMM that define a period of time for completion of required tasks (e.g., weekly, monthly, quarterly, annual), unless specified otherwise in the section or subsection that imposes the requirement, refer to the standard calendar periods.

(1) Notwithstanding time periods specified in the subpart MMM for completion of required tasks, such time periods may be changed by mutual agreement between the owner and operator and the Administrator, as specified in subpart A of this part (e.g., a period could begin on the compliance date or

another date, rather than on the first day of the standard period). For each time period that is changed by agreement, the revised period shall remain in effect until it is changed. A new request is not necessary for each recurring period.

(2) Where the period specified for compliance is a standard calendar period, if the initial compliance date occurs after the beginning of the period, compliance shall be required according to the schedule specified in paragraph (j)(2)(i) or (ii) of this section, as appropriate.

(i) Compliance shall be required before the end of the standard calendar period within which the compliance deadline occurs, if there remain at least 3 days for tasks that must be performed weekly, at least 2 weeks for tasks that must be performed monthly, at least 1 month for tasks that must be performed each quarter, or at least 3 months for tasks that must be performed annually; or

(ii) In all other cases, compliance shall be required before the end of the first full standard calendar period within which the initial compliance deadline occurs.

(3) In all instances where a provision of this subpart MMM requires completion of a task during each of multiple successive periods, an owner or operator may perform the required task at any time during the specified period, provided the task is conducted at a reasonable interval after completion of the task in the previous period.

(k) *Affirmative defense for violation of emission standards during malfunction.* In response to an action to enforce the standards set forth in this subpart, the owner or operator may assert an affirmative defense to a claim for civil penalties for violations of such standards that are caused by malfunction, as defined at § 63.2. Appropriate penalties may be assessed if the owner or operator fails to meet their burden of proving all of the requirements in the affirmative defense. The affirmative defense shall not be available for claims for injunctive relief.

(1) *Assertion of affirmative defense.* To establish the affirmative defense in any action to enforce such a standard, the owner or operator must timely

meet the reporting requirements in paragraph (k)(2) of this section, and must prove by a preponderance of evidence that:

(i) The violation:

(A) Was caused by a sudden, infrequent, and unavoidable failure of air pollution control equipment, process equipment, or a process to operate in a normal or usual manner; and

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

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

(D) Was not part of a recurring pattern indicative of inadequate design, operation, or maintenance; and

(ii) Repairs were made as expeditiously as possible when a violation occurred; and

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

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

(v) All possible steps were taken to minimize the impact of the violation on ambient air quality, the environment, and human health; and

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

(vii) All of the actions in response to the violation were documented by properly signed, contemporaneous operating logs; and

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

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

that were the result of the malfunction.

(2) *Report.* The owner or operator seeking to assert an affirmative defense shall submit a written report to the Administrator, with all necessary supporting documentation, that explains how it has met the requirements set forth in paragraph (k)(1) of this section. This affirmative defense report shall be included in the first periodic compliance report, deviation report, or excess emission report otherwise required after the initial occurrence of the violation of the relevant standard (which may be the end of any applicable averaging period). If such compliance, deviation report or excess emission report is due less than 45 days after the initial occurrence of the violation, the affirmative defense report may be included in the second compliance, deviation report or excess emission report due after the initial occurrence of the violation of the relevant standard.

[64 FR 33589, June 23, 1999, as amended at 67 FR 59340, Sept. 20, 2002; 79 FR 17371, Mar. 27, 2014]

§ 63.1361 Definitions.

Terms used in this subpart are defined in the CAA, in subpart A of this part, or in this section. If the same term is defined in subpart A of this part and in this section, it shall have the meaning given in this section for the purposes of this subpart MMM.

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

Air pollution control device or control device means equipment installed on a process vent, storage vessel, wastewater treatment exhaust stack, or combination thereof that reduces the mass of HAP emitted to the air. The equipment may consist of an individual device or a series of devices. Examples include incinerators, carbon adsorption units, condensers, flares, boilers, process heaters, and gas absorbers. Process condensers are not considered air pol-

lution control devices or control devices.

Bag dump means equipment into which bags or other containers containing a powdered, granular, or other solid feedstock material are emptied. A bag dump is part of the process.

Batch emission episode means a discrete venting episode that is associated with a single unit operation. A unit operation may have more than one batch emission episode. For example, a batch distillation unit operation may consist of batch emission episodes associated with charging and heating. Charging the vessel with HAP will result in one discrete batch emission episode that will last through the duration of the charge and will have an average flowrate equal to the rate of the charge. Another discrete batch emission episode will result from the expulsion of expanded vapor as the contents of the vessel are heated.

Batch operation means a noncontinuous operation involving intermittent or discontinuous feed into PAI or integral intermediate manufacturing equipment, and, in general, involves the emptying of the equipment after the batch 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. A batch process consists of a series of batch operations.

Bench-scale batch process means a batch process (other than a research and development facility) that is 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.

Block means a time period equal to, at a maximum, the duration of a single batch.

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

Cleaning operation means routine rinsing, washing, or boil-off of equipment in batch operations between batches.

Closed-loop system means an enclosed system that returns process fluid to the process and is not vented to the atmosphere except through a closed-vent system.

Closed-purge system means a system or combination of system and portable containers, to capture purged liquids. Containers must be covered or closed when not being filled or emptied.

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

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

Connector means flanged, screwed, or other joined fittings used to connect two pipe lines or a pipe line and a piece of equipment. A common connector is a flange. Joined fittings welded completely around the circumference of the interface are not considered connectors for the purpose of this regulation. For the purpose of reporting and record keeping, connector means joined fittings that are not inaccessible, ceramic, or ceramic-lined as described in §63.1255(b)(1)(vii) and 63.1255(f)(3).

Construction means the onsite fabrication, erection, or installation of an affected source or dedicated PAI process unit. Addition of new equipment to an affected source does not constitute construction, provided the new equipment is not a dedicated PAI process unit with the potential to emit 10 tons/yr of any one HAP or 25 tons/yr of combined HAP, but it may constitute reconstruction of the affected source or PAI process unit if it satisfies the definition of reconstruction in this section. At an affected source, changing raw materials processed and reconfiguring non-dedicated equipment to create a non-dedicated PAI process unit do not constitute construction.

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 HAP are generated in the process as well as added as raw material, consumption includes the quantity generated in the process.

Container, as used in the wastewater provisions, means any portable waste management unit that has a capacity greater than or equal to 0.1 m³ in which a material is stored, transported, treated, or otherwise handled. Examples of containers are drums, barrels, tank trucks, barges, dumpsters, tank cars, dump trucks, and ships.

Continuous process means a process where the inputs and outputs flow continuously throughout the duration of the process. Continuous processes typically approach steady state.

Continuous seal means a seal that forms a continuous closure that completely covers the space between the wall of the storage vessel and the edge of the floating roof. A continuous seal may be a vapor-mounted, liquid-mounted, or metallic shoe seal.

Controlled HAP emissions means the quantity of HAP components discharged to the atmosphere from an air pollution control device.

Cover, as used in the wastewater provisions, means a device or system which is placed on or over a waste management unit containing wastewater or residuals so that the entire surface area is enclosed to minimize air emissions. A cover may have openings necessary for operation, inspection, and maintenance of the waste management unit such as access hatches, sampling ports, and gauge wells provided that each opening is closed when not in use. Examples of covers include a fixed roof installed on a wastewater tank, a lid installed on a container, and an air-supported enclosure installed over a waste management unit.

Dedicated PAI process unit means a PAI process unit constructed from equipment that is fixed in place and designed and operated to produce only a single product or co-products. The

equipment is not designed to be reconfigured to create different process units, and it is not operated with different raw materials so as to produce different products.

Double block and bleed system means two block valves connected in series with a bleed valve or line that can vent the line between the two block valves.

Duct work means a conveyance system such as those commonly used for heating and ventilation systems. It is often made of sheet metal and often has sections connected by screws or crimping. Hard-piping is not ductwork.

Equipment, for purposes of § 63.1363, means each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, and instrumentation system in organic hazardous air pollutant service.

External floating roof means a pontoon-type or double-deck type cover that rests on the liquid surface in a storage tank or waste management unit with no fixed roof.

FIFRA means the Federal Insecticide, Fungicide, and Rodenticide Act.

Fill or filling means the introduction of organic HAP into a storage tank or the introduction of a wastewater stream or residual into a waste management unit, but not necessarily to complete capacity.

First attempt at repair means to take action for the purpose of stopping or reducing leakage of organic material to the atmosphere.

Fixed roof means a cover that is mounted on a waste management unit or storage tank in a stationary manner and that does not move with fluctuations in liquid level.

Flame ionization detector (FID) means a device in which the measured change in conductivity of a standard flame (usually hydrogen) due to the insertion of another gas or vapor is used to detect the gas or vapor.

Floating roof means a cover consisting of a double deck, pontoon single deck, internal floating cover or covered floating roof, which rests upon and is supported by the liquid being contained, and is equipped with a continuous seal or seals to close the space between the roof edge and waste management unit or storage vessel wall.

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

Formulation of pesticide products means the mixing, blending, or diluting of a PAI with one or more other PAI or inert ingredients.

Group 1 process vent means any process vent from a process at an existing or new affected source for which the uncontrolled organic HAP emissions from the sum of all process vents are greater than or equal to 0.15 Mg/yr and/or the uncontrolled hydrogen chloride (HCl) and chlorine emissions from the sum of all process vents are greater than or equal to 6.8 Mg/yr.

Group 1 storage vessel means a storage vessel at an existing affected source with a capacity equal to or greater than 75 m³ and storing material with a maximum true vapor pressure greater than or equal to 3.45 kPa, a storage vessel at a new affected source with a capacity equal to or greater than 40 m³ and storing material with a maximum true vapor pressure greater than or equal to 16.5 kPa, or a storage vessel at a new affected source with a capacity greater than or equal to 75 m³ and storing material with a maximum true vapor pressure greater than or equal to 3.45 kPa.

Group 1 wastewater stream means process wastewater at an existing or new source that meets the criteria for Group 1 status in § 63.132(c) for compounds in Table 9 of subpart G of this part or a maintenance wastewater stream that contains 5.3 Mg of compounds in Table 9 of subpart G of this part per discharge event.

Group 2 process vent means any process vent that does not meet the definition of a Group 1 process vent.

Group 2 storage vessel means a storage vessel that does not meet the definition of a Group 1 storage vessel.

Group 2 wastewater stream means any wastewater stream that does not meet the definition of a Group 1 wastewater stream.

Group of processes means all of the equipment associated with processes in a building, processing area, or facility-wide. A group of processes may consist of a single process.

Halogenated compounds means organic compounds that contain chlorine atoms.

Halogenated vent stream means a process, storage vessel, or waste management unit vent stream determined to have a concentration of halogenated compounds of greater than 20 ppmv, as determined through process knowledge, test results using Method 18 of 40 CFR part 60, appendix A, or test results using any other test method that has been validated according to the procedures in Method 301 of appendix A of this part.

Hard-piping means piping or tubing that is manufactured and properly installed using good engineering judgment and standards, such as ANSI B31-3.

Impurity means a substance that is produced coincidentally with the product(s), or is present in a raw material. An impurity does not serve a useful purpose in the production or use of the product(s) and is not isolated.

In gas/vapor service means that a piece of equipment in organic HAP service contains a gas or vapor at operating conditions.

In heavy liquid service means that a piece of equipment in organic HAP service is not in gas/vapor service or in light liquid service.

In light liquid service means that a piece of equipment in organic HAP service contains a liquid that meets the following conditions:

- (1) The vapor pressure of one or more of the organic compounds is greater than 0.3 kPa at 20 °C;
- (2) The total concentration of the pure organic compounds constituents having a vapor pressure greater than 0.3 kPa at 20 °C is equal to or greater than 20 percent by weight of the total process stream; and
- (3) The fluid is a liquid at operating conditions.

NOTE: To definition of “In light liquid service: Vapor pressures may be determined by the methods described in 40 CFR 60.485(e)(1).

In liquid service means that a piece of equipment in organic HAP service is not in gas/vapor service.

In organic hazardous air pollutant or 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) of subpart H of this part. The provisions of § 63.180(d) of subpart H of this part also specify how to determine that a piece of equipment is not in organic HAP service.

In vacuum service means that equipment is operating at an internal pressure which is at least 5 kPa below ambient pressure.

In-situ sampling systems means non-extractive samplers or in-line samplers.

Individual drain system means the stationary system used to convey wastewater streams or residuals to a waste management unit or to discharge or disposal. The term includes: hard piping; all process drains and junction boxes; and associated sewer lines, other junction boxes, manholes, sumps, and lift stations conveying wastewater streams or residuals. A segregated stormwater sewer system, which is a drain and collection system designed and operated for the sole purpose of collecting rainfall-runoff at a facility, and which is segregated from all other individual drain systems, is excluded from this definition.

Instrumentation system means a group of equipment components used to condition and convey a sample of the process fluid to analyzers and instruments for the purpose of determining process operating conditions (e.g., composition, pressure, flow, etc.). Valves and connectors are the predominant type of equipment used in instrumentation systems; however, other types of equipment may also be included in these systems. Only valves nominally 0.5 inches and smaller and connectors nominally 0.75 inches and smaller in diameter are considered instrumentation systems for the purposes of this subpart. Valves greater than nominally 0.5 inches and connectors greater than nominally 0.75 inches associated with instrumentation systems are not considered part of instrumentation systems and must be monitored individually.

Integral intermediate means an intermediate for which 50 percent or more of the annual production is used in on-site production of any PAI(s) and that is not stored before being used in the

production of another integral intermediate or the PAI(s). For the purposes of this definition, an intermediate is stored if it is discharged to a storage vessel and at least one of the following conditions is met: the processing equipment that discharges to the storage vessel is shutdown before the processing equipment that withdraws from the storage vessel is started up; during an annual period, the material must be stored in the vessel for at least 30 days before being used to make a PAI; or the processing equipment that discharges to the storage vessel is located in a separate building (or processing area) of the plant than the processing equipment that uses material from the storage vessel as a feedstock, and control equipment is not shared by the two processing areas. Any process unit that produces an intermediate and is subject to subpart F of this part is not an integral intermediate.

Intermediate means an organic compound that is manufactured in a process and that is further processed or modified in one or more additional steps to ultimately produce a PAI.

Internal floating roof means a cover that rests or floats on the liquid surface (but not necessarily in complete contact with it) inside a storage tank or waste management unit that has a permanently affixed roof.

Junction box means a manhole or access point to a wastewater sewer system line or a lift station.

Large control device means a control device that controls process vents, and the total HAP emissions into the control device from all sources are greater than or equal to 10 tons/yr.

Liquid-mounted seal means a foam- or liquid-filled seal mounted in contact with the liquid between the wall of the storage vessel or waste management unit and the floating roof. The seal is mounted continuously around the tank or unit.

Liquids dripping means any visible leakage from the seal including dripping, spraying, misting, clouding, and ice formation. Indications of liquid dripping include puddling or new stains that are indicative of an existing evaporated drip.

Maintenance wastewater means wastewater generated by the draining of

process fluid from components in the PAI process unit into an individual drain system prior to or during maintenance activities. Maintenance wastewater can be generated through planned or unplanned shutdowns and during periods not associated with a shutdown. Examples of activities that can generate maintenance wastewaters include descaling of heat exchanger tubing bundles, cleaning of distillation column traps, draining of low legs and high point bleeds, draining of pumps into an individual drain system, and draining of portions of the PAI process unit for repair.

Malfunction means any sudden, infrequent, and not reasonably preventable failure of air pollution control equipment, emissions monitoring equipment, process equipment, or a process to operate in a normal or usual manner which causes, or has the potential to cause, the emission limitations in an applicable standard to be exceeded. Failures that are caused all or in part by poor maintenance or careless operation are not malfunctions.

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

(1) In accordance with methods described in Chapter 19.2 of the American Petroleum Institute's Manual of Petroleum Measurement Standards, Evaporative Loss From Floating-Roof Tanks (incorporated by reference as specified in §63.14 in subpart A of this part); or

(2) As obtained from standard reference texts; or

(3) As determined by the American Society for Testing and Materials Method D2879-97, Test Method for Vapor Pressure-Temperature Relationship and Initial Decomposition Temperature of Liquids by Isoteniscope (incorporated by reference as specified in §63.14 of subpart A of this part); or

(4) Any other method approved by the Administrator.

Metallic shoe seal or mechanical shoe seal means metal sheets that are held vertically against the wall of the storage tank by springs, weighted levers, or other mechanisms and connected to the floating roof by braces or other means. A flexible coated fabric (envelope) spans the annular space between the metal sheet and the floating roof.

Non-dedicated PAI process unit means a process unit that is not a dedicated PAI process unit.

Nonrepairable means that it is technically infeasible to repair a piece of equipment from which a leak has been detected without a process shutdown.

Open-ended valve or line means any valve, except pressure relief valves, having one side of the valve seat in contact with process fluid and one side open to atmosphere, either directly or through open piping.

Operating scenario, for the purposes of reporting and recordkeeping, means a description of a PAI process unit, including: identification of each wastewater point of determination (POD) and process vent, their associated emissions episodes and durations, and their associated level of control and control devices, as applicable; calculations and engineering analyses required to demonstrate compliance; and a description of operating and/or testing conditions for any associated control device.

Organic compound, as used in the definitions of intermediate and PAI, means any compound that contains both carbon and hydrogen with or without other elements.

Organic HAP means those HAP listed in section 112(b) of the CAA that are measured according to the procedures of Method 18 or Method 25A, 40 CFR part 60, appendix A.

Pesticide active ingredient or PAI means any material that is an active ingredient within the meaning of FIFRA section 2(a); that is used to produce an insecticide, herbicide, or fungicide end use pesticide product; that consists of one or more organic compounds; and that must be labeled in accordance with 40 CFR part 156 for transfer, sale, or distribution. These materials are typically described by

North American Industrial Classification System (NAICS) Codes 325199 and 32532 (i.e., previously known as Standard Industrial Classification System Codes 2869 and 2879). These materials are identified by product classification codes 01, 21, 02, 04, 44, 07, 08, and 16 in block 19 on the 1999 version of EPA form 3540-16, the Pesticides Report for Pesticide-Producing Establishments. The materials represented by these codes are: insecticides; insecticide-fungicides; fungicides; herbicides; herbicide-fungicides; plant regulators; defoliant, desiccants; or multi-use active ingredients.

Pesticide active ingredient manufacturing process unit (PAI process unit) means a process unit that is used to produce a material that is primarily used as a PAI or integral intermediate. A PAI process unit consists of: the process, as defined in this subpart; associated storage vessels, as determined by the procedures in § 63.1360(f); equipment identified in § 63.1362(k); connected piping and ducts; and components such as pumps, compressors, agitators, pressure relief devices, sampling connection systems, open-ended valves or lines, valves, connectors, and instrumentation systems. A material is primarily used as a PAI or integral intermediate if more than 50 percent of the projected annual production from a process unit in the 3 years after June 23, 1999 or startup, whichever is later, is used as a PAI or integral intermediate; recordkeeping is required if the material is used as a PAI or integral intermediate, but not as the primary use. If the primary use changes to a PAI or integral intermediate, the process unit becomes a PAI process unit unless it is already subject to the HON. If the primary use changes from a PAI or integral intermediate to another use, the process unit remains a PAI process unit. Any process tank containing an integral intermediate is part of the PAI process unit used to produce the integral intermediate. A process unit that produces an intermediate that is not an integral intermediate may be designated as a PAI process unit according to the procedures of § 63.1360(g). Formulation of pesticide products is not considered

part of a PAI process unit. Quality assurance and quality control laboratories are not considered part of a PAI process unit.

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

Point of determination (POD) means each point where a wastewater stream exits the PAI process unit.

NOTE TO DEFINITION OF "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 Table 9 compounds as determined in §63.144 of subpart G of this part. 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.

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 due to a malfunction in the process.

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

Process means a logical grouping of processing equipment which collectively function to produce a product. For the purpose of this subpart, a PAI process includes all, or a combination of, reaction, recovery, separation, purification, treatment, cleaning, and other activities or unit operations which are used to produce a PAI or integral intermediate. Ancillary activi-

ties are not considered a PAI process or any part of a PAI process. Ancillary activities include boilers and incinerators (not used to comply with the provisions of §63.1362), chillers or 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 PAI. A PAI process and all integral intermediate processes for which 100 percent of the annual production is used in the production of the PAI may be linked together and defined as a single PAI process unit.

Process condenser means a condenser whose primary purpose is to recover material as an integral part of a unit operation. The condenser must cause a vapor-to-liquid phase change for periods during which the temperature of liquid in the process equipment is at or above its boiling or bubble point. Examples of process condensers include distillation condensers, reflux condensers, and condensers used in stripping or flashing operation. In a series of condensers, all condensers up to and including the first condenser with an exit gas temperature below the boiling or bubble point of the liquid in the process equipment are considered to be process condensers. All condensers in line prior to the vacuum source are included in this definition.

Process shutdown means a work practice or operational procedure that stops production from a process or part of a process during which it is technically feasible to clear process material from a process or part of a process consistent with safety constraints and during which repairs can be effected. An unscheduled work practice or operational procedure that stops production from a process or part of a process for less than 24 hours is not a process shutdown. An unscheduled work practice or operational procedure that would stop production from a process or part of a process for a shorter period of time than would be required to clear the process or part of the process of materials and start up the process, and would result in greater emissions than delay of repair of leaking components

until the next scheduled process shutdown, is not a process shutdown. The use of spare equipment and technically feasible bypassing of equipment without stopping production are not process shutdowns.

Process tank means a tank that is used within a process to collect material discharged from a feedstock storage vessel or equipment within the process before the material is transferred to other equipment within the process or a product storage vessel. In many process tanks, unit operations such as reactions and blending are conducted. Other process tanks, such as surge control vessels and bottom receivers, however, may not involve unit operations.

Process unit means the equipment assembled and connected by pipes or ducts to process raw materials and to manufacture an intended product.

Process unit group means a group of process units that manufacture PAI and products other than PAI by alternating raw materials or operating conditions, or by reconfiguring process equipment. A process unit group is determined according to the procedures specified in § 63.1360(g).

Process vent means a point of emission from processing equipment to the atmosphere or a control device. The vent may be the release point for an emission stream associated with an individual unit operation, or it may be the release point for emission streams from multiple unit operations that have been manifolded together into a common header. Examples of process vents include, but are not limited to, vents on condensers used for product recovery, bottom receivers, surge control vessels, reactors, filters, centrifuges, process tanks, and product dryers. A vent is not considered to be a process vent for a given emission episode if the undiluted and uncontrolled emission stream that is released through the vent contains less than 50 ppmv HAP, as determined through process knowledge that no HAP are present in the emission stream; using an engineering assessment as discussed in § 63.1365(c)(2)(ii); from test data collected using Method 18 of 40 CFR part 60, appendix A; or from test data collected using any other test method

that has been validated according to the procedures in Method 301 of appendix A of this part. Process vents do not include vents on storage vessels regulated under § 63.1362(c), vents on wastewater emission sources regulated under § 63.1362(d), or pieces of equipment regulated under § 63.1363.

Process wastewater means wastewater which, during manufacturing or processing, comes into direct contact with, or results from, the production or use of any raw material, intermediate product, finished product, by-product, or waste product. Examples include: product tank drawdown or feed tank drawdown; water formed during a chemical reaction or used as a reactant; water used to wash impurities from organic products or reactants; water used to clean process equipment; water used to cool or quench organic vapor streams through direct contact; and condensed steam from jet ejector systems pulling vacuum on vessels containing organics.

Product means the compound(s) or chemical(s) that are produced or manufactured as the intended output of a process unit. Impurities and wastes are not considered products.

Product dryer means equipment that is used to remove moisture or other liquid from granular, powdered, or other solid PAI or integral intermediate products prior to storage, formulation, shipment, or other uses. The product dryer is part of the process.

Product dryer vent means a process vent from a product dryer through which a gas stream containing gaseous pollutants (i.e., organic HAP, HCl, or chlorine), particulate matter, or both are released to the atmosphere or are routed to a control device.

Production-indexed HAP consumption factor (HAP factor) is the result of dividing the annual consumption of total HAP by the annual production rate, per process.

Production-indexed VOC consumption factor (VOC factor) is the result of dividing the annual consumption of total VOC by the annual production rate, per process.

Publicly owned treatment works (POTW) is defined at 40 CFR part 403.3(0).

Reactor means a device or vessel in which one or more chemicals or reactants, other than air, are combined or decomposed in such a way that their molecular structures are altered and one or more new organic compounds are formed.

Reconfiguration means disassembly of processing equipment for a particular non-dedicated process unit and re-assembly of that processing equipment in a different sequence, or in combination with other equipment, to create a different non-dedicated process unit.

Reconstruction, as used in § 63.1360(b), shall have the meaning given in § 63.2, except that “affected or previously unaffected stationary source” shall mean either “affected facility” or “PAI process unit.”

Recovery device, as used in the wastewater provisions, means an individual unit of equipment capable of, and normally used for the purpose of, recovering chemicals for fuel value (i.e., net positive heating value), use, reuse, or for sale for fuel value, use, or reuse. Examples of equipment that may be recovery devices include organic removal devices such as decanters, strippers, or thin-film evaporation units. To be a recovery device, a decanter and any other equipment based on the operating principle of gravity separation must receive only multi-phase liquid streams.

Repaired means that equipment is adjusted, or otherwise altered, to eliminate a leak as defined in the applicable paragraphs of § 63.1363.

Research and development facility means any stationary source whose primary purpose is to conduct research and development, where the operations are under the close supervision of technically trained personnel, and is not engaged in the manufacture of products for commercial sale, except in a de minimis manner.

Residual means any liquid or solid material containing Table 9 compounds (as defined in § 63.111 of subpart G of this part) that is removed from a wastewater stream by a waste management unit or treatment process that does not destroy organics (non-destructive unit). Examples of residuals from nondestructive wastewater management units include the organic

layer and bottom residue removed by a decanter or organic-water separator and the overheads from a steam stripper or air stripper. Examples of materials which are not residuals include: silt; mud; leaves; bottoms from a steam stripper or air stripper; and sludges, ash, or other materials removed from wastewater being treated by destructive devices such as biological treatment units and incinerators.

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 this vapor headspace 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, standard engineering codes and practices, or other requirements for the safe handling of flammable, combustible, explosive, reactive, or hazardous materials.

Sampling connection system means an assembly of equipment within a process unit used during periods of representative operation to take samples of the process fluid. Equipment used to take nonroutine grab samples is not considered a sampling connection system.

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

Set pressure means the pressure at which a properly operating pressure relief device begins to open to relieve atypical process system operating pressure.

Sewer line means a lateral, trunk line, branch line, or other conduit including, but not limited to, grates, trenches, etc., used to convey wastewater streams or residuals to a downstream waste management unit.

Shutdown means the cessation of operation of a continuous PAI process unit for any purpose. Shutdown also means the cessation of a batch PAI process unit or any related individual piece of equipment required or used to comply with this part or for emptying and degassing storage vessels for periodic maintenance, replacement of equipment, repair, or any other purpose not excluded from this definition. Shutdown does not apply to cessation of a batch PAI process unit at the end of a campaign or between batches (e.g., for rinsing or washing equipment), for routine maintenance, or for other routine operations.

Small control device means a control device that controls process vents, and the total HAP emissions into the control device from all sources are less than 10 tons of HAP per year.

Startup means the setting in operation of a continuous PAI process unit for any purpose, the first time a new or reconstructed batch PAI process unit begins production, or, for new equipment added, including equipment used to comply with this subpart, the first time the equipment is put into operation. For batch process units, startup does not apply 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, after a shutdown for maintenance, or when the equipment is put into operation as part of a batch within a campaign. As used in § 63.1363, startup means the setting in operation of a piece of equipment or a control device that is subject to this subpart.

Storage vessel means a tank or other vessel that is used to store organic liquids that contain one or more HAP and that has been assigned, according to the procedures in § 63.1360(f) or (g), to a PAI process unit that is subject to this

subpart MMM. The following are not considered storage vessels 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 material that contains no organic HAP or contains organic HAP only as impurities;
- (4) Wastewater storage tanks;
- (5) Process tanks; and
- (6) Nonwastewater waste tanks.

Supplemental gases means any non-affected gaseous streams (streams that are not from process vents, storage vessels, equipment or waste management units) that contain less than 50 ppmv TOC and less than 50 ppmv total HCl and chlorine, as determined through process knowledge, and are combined with an affected vent stream. Supplemental gases are often used to maintain pressures in manifolds or for fire and explosion protection and prevention. Air required to operate combustion device burner(s) is not considered a supplemental gas.

Surface impoundment means a waste management unit which is a natural topographic depression, manmade excavation, or diked area formed primarily of earthen materials (although it may be lined with manmade materials), which is designed to hold an accumulation of liquid wastes or waste containing free liquids. A surface impoundment is used for the purpose of treating, storing, or disposing of wastewater or residuals, and is not an injection well. Examples of surface impoundments are equalization, settling, and aeration pits, ponds, and lagoons.

Total organic compounds (TOC) means those compounds measured according to the procedures of Method 18 or Method 25A, 40 CFR part 60, appendix A.

Treatment process means a specific technique that removes or destroys the organics in a wastewater or residual stream such as a steam stripping unit, thin-film evaporation unit, waste incinerator, biological treatment unit, or any other process applied to wastewater streams or residuals to comply with § 63.138 of subpart G of this part.

Most treatment processes are conducted in tanks. Treatment processes are a subset of waste management units.

Uncontrolled HAP emissions means a gas stream containing HAP which has exited the process (or process condenser, if any), but which has not yet been introduced into an air pollution control device to reduce the mass of HAP in the stream. If the process vent is not routed to an air pollution control device, uncontrolled emissions are those HAP emissions released to the atmosphere.

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 units, extraction columns, absorbers, decanters, dryers, condensers, and filtration equipment.

Vapor-mounted seal means a continuous seal that completely covers the annular space between the wall of the storage tank or waste management unit and the edge of the floating roof, and is mounted such that there is a vapor space between the stored liquid and the bottom of the seal.

Volatile organic compounds are defined in 40 CFR 51.100.

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, surface impoundments, individual drain systems, and biological wastewater treatment units. Examples of equipment that may be waste management units include containers, air flotation units, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin-film evaporation units. If such equipment is a recovery device, then it is part of a PAI process unit and is not a waste management unit.

Wastewater means water that meets either of the conditions described in paragraph (1) or (2) of this definition and is discarded from a PAI process unit that is at an affected source:

(1) Is generated from a PAI process or a scrubber used to control emissions from a PAI process and contains either:

(i) An annual average concentration of compounds in Table 9 of subpart G of this part of at least 5 ppmw and has an average flow rate of 0.02 L/min or greater; or

(ii) An annual average concentration of compounds in Table 9 of subpart G of this part of at least 10,000 ppmw at any flow rate;

(2) Is generated from a PAI process unit as a result of maintenance activities and contains at least 5.3 Mg of compounds listed in Table 9 of subpart G of this part per individual discharge event.

Wastewater tank means a stationary waste management unit that is designed to contain an accumulation of wastewater or residuals and is constructed primarily of nonferrous materials (e.g., wood, concrete, steel, plastic) which provide structural support. Wastewater tanks used for flow equalization are included in this definition.

Water seal controls means a seal pot, p-leg trap, or other type of trap filled with water (e.g., flooded sewers that maintain water levels adequate to prevent air flow through the system) that creates a water barrier between the sewer line and the atmosphere. The water level of the seal must be maintained in the vertical leg of a drain in order to be considered a water seal.

[64 FR 33589, June 23, 1999, as amended at Nov. 21, 2001; 67 FR 59343, Sept. 20, 2002; 71 FR 20460, Apr. 20, 2006; 79 FR 17372, Mar. 27, 2014]

§ 63.1362 Standards.

(a) On and after the compliance dates specified in § 63.1364, each owner or operator of an affected source subject to the provisions of this subpart shall control HAP emissions to the levels specified in this section and in § 63.1363, as summarized in Table 2 of this subpart.

(b) *Process vents*. (1) The owner or operator of an existing source shall comply with the requirements of paragraphs (b)(2) and (3) of this section. The owner or operator of a new source shall comply with the requirements of paragraphs (b)(4) and (5) of this section. Compliance with paragraphs (b)(2) through (b)(5) of this section shall be

demonstrated through the applicable test methods and initial compliance procedures in § 63.1365 and the monitoring requirements in § 63.1366.

(2) *Organic HAP emissions from existing sources.* The owner or operator of an existing affected source must comply with the requirements in either paragraph (b)(2)(i) of this section or with the requirements in paragraphs (b)(2)(ii) through (iv) of this section.

(i) The uncontrolled organic HAP emission rate shall not exceed 0.15 Mg/yr from the sum of all process vents within a process.

(ii) (A) Except as provided in paragraph (b)(2)(ii)(B) of this section, uncontrolled organic HAP emissions from a process vent shall be reduced by 98 percent by weight or greater if the flow-weighted average flowrate for the vent as calculated using Equation 1 of this subpart is less than or equal to the flowrate calculated using Equation 2 of this subpart.

$$FR_a = \frac{\sum_{i=1}^n (D_i)(FR_i)}{\sum_{i=1}^n D_i} \quad (\text{Eq. 1})$$

$$FR = 0.02 * (HL) - 1,000 \quad (\text{Eq. 2})$$

Where:

FR_a=flow-weighted average flowrate for the vent, scfm

D_i=duration of each emission event, min

FR_i=flowrate of each emission event, scfm

n=number of emission events

FR=flowrate, scfm

HL=annual uncontrolled organic HAP emissions, lb/yr, as defined in § 63.1361

(B) If the owner or operator can demonstrate that a control device, installed on or before November 10, 1997 on a process vent otherwise subject to the requirements of paragraph (b)(2)(ii)(A) of this section, reduces inlet emissions of total organic HAP by greater than or equal to 90 percent by weight but less than 98 percent by weight, then the control device must be operated to reduce inlet emissions of total organic HAP by 90 percent by weight or greater.

(iii) Excluding process vents that are subject to the requirements in paragraph (b)(2)(ii) of this section, uncon-

trolled organic HAP emissions from the sum of all process vents within a process shall be reduced by 90 percent or greater by weight.

(iv) As an alternative to the requirements in paragraphs (b)(2)(ii) and (iii) of this section, uncontrolled organic HAP emissions from any process vent may be reduced in accordance with any of the provisions in paragraphs (b)(2)(iv)(A) through (D) of this section. All remaining process vents within a process must be controlled in accordance with paragraphs (b)(2)(ii) and (iii) of this section.

(A) To outlet concentrations less than or equal to 20 ppmv; or

(B) By a flare that meets the requirements of § 63.11(b); or

(C) By a control device specified in § 63.1365(a)(4); or

(D) In accordance with the alternative standard specified in paragraph (b)(6) of this section.

(3) *HCl and Cl₂ emissions from existing sources.* For each process, the owner or operator of an existing source shall comply with the requirements of either paragraph (b)(3)(i) or (ii) of this section.

(i) The uncontrolled HCl and Cl₂ emissions, including HCl generated from the combustion of halogenated process vent emissions, from the sum of all process vents within a process shall not exceed 6.8 Mg/yr.

(ii) HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall be reduced by 94 percent or greater or to outlet concentrations less than or equal to 20 ppmv.

(4) *Organic HAP emissions from new sources.* For each process, the owner or operator of a new source shall comply with the requirements of either paragraph (b)(4)(i) or (ii) of this section.

(i) The uncontrolled organic HAP emissions shall not exceed 0.15 Mg/yr from the sum of all process vents within a process.

(ii) The uncontrolled organic HAP emissions from the sum of all process vents within a process at a new affected source that are not controlled according to any of the requirements of paragraphs (b)(4)(i)(A) through (C) or

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(b)(6) of this section shall be reduced by 98 weight percent or greater.

(A) To outlet concentrations less than or equal to 20 ppmv; or

(B) By a flare that meets the requirements of § 63.11(b); or

(C) By a control device specified in § 63.1365(a)(4).

(5) *HCl and Cl₂ emissions from new sources.* For each process, the owner or operator of a new source shall comply with the requirements of either paragraph (b)(5)(i), (ii), or (iii) of this section.

(i) The uncontrolled HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process shall not exceed 6.8 Mg/yr.

(ii) If HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process are greater than 6.8 Mg/yr and less than or equal to 191 Mg/yr, these HCl and Cl₂ emissions shall be reduced by 94 percent or to an outlet concentration less than or equal to 20 ppmv.

(iii) If HCl and Cl₂ emissions, including HCl generated from combustion of halogenated process vent emissions, from the sum of all process vents within a process are greater than 191 Mg/yr, these HCl and Cl₂ emissions shall be reduced by 99 percent or greater or to an outlet concentration less than or equal to 20 ppmv.

(6) *Alternative standard.* As an alternative to the provisions in paragraphs (b)(2) through (5) of this section, the owner or operator may route emissions from a process vent to a combustion control device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20 ppmv or less, and an outlet concentration of HCl and Cl₂ of 20 ppmv or less. If the owner or operator is routing emissions to a non-combustion control device or series of control devices, the control device(s) must achieve an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 50 ppmv or less, and an outlet concentration of HCl and Cl₂ of 50 ppmv or less. Any process vents within a process that are not routed to such a control

device or series of control devices must be controlled in accordance with the provisions of paragraph (b)(2)(ii), (iii), (iv), (b)(3)(ii), (b)(4)(ii), (b)(5)(ii) or (iii) of this section, as applicable.

(c) *Storage vessels.* (1) The owner or operator shall either determine the group status of a storage vessel or designate it as a Group 1 storage vessel. If the owner or operator elects to designate the storage vessel as a Group 1 storage vessel, the owner or operator is not required to determine the maximum true vapor pressure of the material stored in the storage vessel.

(2) *Standard for existing sources.* Except as specified in paragraphs (c)(4), (5), and (6) of this section, the owner or operator of a Group 1 storage vessel at an existing affected source, as defined in § 63.1361, shall equip the affected storage vessel with one of the following:

(i) A fixed roof and internal floating roof, or

(ii) An external floating roof, or

(iii) An external floating roof converted to an internal floating roof, or

(iv) A closed vent system meeting the conditions of paragraph (j) of this section and a control device that meets any of the following conditions:

(A) Reduces organic HAP emissions by 95 percent by weight or greater; or

(B) Reduces organic HAP emissions to outlet concentrations of 20 ppmv or less; or

(C) Is a flare that meets the requirements of § 63.11(b); or

(D) Is a control device specified in § 63.1365(a)(4).

(3) *Standard for new sources.* Except as specified in paragraphs (c)(4), (5), and (6) of this section, the owner or operator of a Group 1 storage vessel at a new source, as defined in § 63.1361, shall equip the affected storage vessel in accordance with any one of paragraphs (c)(2)(i) through (iv) of this section.

(4) *Alternative standard.* As an alternative to the provisions in paragraphs (c)(2) and (3) of this section, the owner or operator of an existing or new affected source may route emissions from storage vessels to a combustion control device achieving an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 20

ppmv or less, and an outlet concentration of hydrogen chloride and chlorine of 20 ppmv or less. If the owner or operator is routing emissions to a non-combustion control device or series of control devices, the control device(s) must achieve an outlet TOC concentration, as calibrated on methane or the predominant HAP, of 50 ppmv or less, and an outlet concentration of HCl and Cl₂ of 50 ppmv or less.

(5) *Planned routine maintenance.* The owner or operator is exempt from the specifications in paragraphs (c)(2) through (4) of this section during periods of planned routine maintenance of the control device that do not exceed 240 hr/yr. The owner or operator 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 vessel 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.

(6) *Vapor balancing alternative.* As an alternative to the requirements in paragraphs (c)(2) and (3) of this section, the owner or operator of an existing or new affected source may implement vapor balancing in accordance with paragraphs (c)(6)(i) through (vii) of this section.

(i) The vapor balancing system must be designed and operated to route organic HAP vapors displaced from loading of the storage tank to the railcar or tank truck from which the storage tank is filled.

(ii) Tank trucks and railcars must have a current certification in accordance with the U.S. Department of Transportation pressure test requirements of 49 CFR part 180 for tank trucks and 49 CFR 173.31 for railcars.

(iii) Hazardous air pollutants must only be unloaded from tank trucks or railcars when vapor collection systems are connected to the storage tank's vapor collection system.

(iv) No pressure relief device on the storage tank or on the railcar or tank truck shall open during loading or as a result of diurnal temperature changes (breathing losses).

(v) Pressure relief devices on affected storage tanks must be set to no less than 2.5 psig at all times to prevent breathing losses. The owner or operator shall record the setting as specified in § 63.1367(b)(8) and comply with the following requirements for each pressure relief valve:

(A) The pressure relief valve shall be monitored quarterly using the method described in § 63.180(b).

(B) An instrument reading of 500 ppmv or greater defines a leak.

(C) When a leak is detected, it shall be repaired as soon as practicable, but no later than 5 days after it is detected, and the owner or operator shall comply with the recordkeeping requirements of § 63.1363(g)(4)(i) through (iv).

(vi) Railcars or tank trucks that deliver HAP to an affected storage tank must be reloaded or cleaned at a facility that utilizes one of the following control techniques:

(A) The railcar or tank truck must be connected to a closed vent system with a control device that reduces inlet emissions of HAP by 90 percent by weight or greater; or

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

(vii) The owner or operator of the facility where the railcar or tank truck is reloaded or cleaned must comply with the following requirements:

(A) Submit to the owner or operator of the affected storage tank and to the Administrator a written certification that the reloading or cleaning facility will meet the requirements of this section. The certifying entity may revoke the written certification by sending a written statement to the owner or operator of the affected storage tank giving at least 90 days notice that the certifying entity is rescinding acceptance of responsibility for compliance with the requirements of this paragraph (c)(6)(vii)(A).

(B) If complying with paragraph (c)(6)(vi)(A) of this section, demonstrate initial compliance in accordance with § 63.1365(d), demonstrate continuous compliance in accordance with § 63.1366, keep records as specified in § 63.1367, and prepare reports as specified in § 63.1368.

(C) If complying with paragraph (c)(6)(vi)(B) of this section, keep records of:

(1) The equipment to be used and the procedures to be followed when reloading the railcar or tank truck and displacing vapors to the storage tank from which the liquid originates, and

(2) Each time the vapor balancing system is used to comply with paragraph (c)(6)(vi)(B) of this section.

(7) Compliance with the provisions of paragraphs (c)(2) and (3) of this section is demonstrated using the initial compliance procedures in § 63.1365(d) and the monitoring requirements in § 63.1366. Compliance with the outlet concentrations in paragraph (c)(4) of this section shall be determined by the initial compliance provisions in § 63.1365(a)(5) and the continuous emission monitoring requirements of § 63.1366(b)(5).

(d) *Wastewater*. The owner or operator of each affected source shall comply with the requirements of §§ 63.132 through 63.147, with the differences noted in paragraphs (d)(1) through (16) of this section for the purposes of this subpart.

(1) When the determination of equivalence criteria in § 63.102(b) is referred to in §§ 63.132, 63.133, and 63.137 of subpart G of this part, the provisions in § 63.6(g) of subpart A of this part shall apply.

(2) When the storage tank requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.147, §§ 63.119 through 63.123 are applicable, with the exception of the differences noted in paragraphs (d)(2)(i) through (iv) of this section.

(i) When the term “storage vessel” is used in §§ 63.119 through 63.123 of subpart G of this part, the definition of the term “storage vessel” in § 63.1361 shall apply for the purposes of this subpart.

(ii) When December 31, 1992, is referred to in § 63.119 of subpart G of this

part, November 10, 1997 shall apply for the purposes of this subpart.

(iii) When April 22, 1994 is referred to in § 63.119 of subpart G of this part, June 23, 1999 shall apply for the purposes of this subpart.

(iv) When the phrase “the compliance date specified in § 63.100 of subpart F of this part” is referred to in § 63.120 of subpart G of this part, the phrase “the compliance date specified in § 63.1364” shall apply for the purposes of this subpart.

(3) To request approval to monitor alternative parameters, as referred to in § 63.146(a) of subpart G of this part, the owner or operator shall comply with the procedures in § 63.8(f) of subpart A of this part, as referred to in § 63.1366(b)(4), instead of the procedures in § 63.151(f) or (g) of subpart G of this part.

(4) When the Notification of Compliance Status report requirements contained in § 63.152(b) of subpart G of this part are referred to in § 63.146 of subpart G of this part, the Notification of Compliance Status report requirements in § 63.1368(f) shall apply for the purposes of this subpart.

(5) When the recordkeeping requirements contained in § 63.152(f) of subpart G of this part are referred to in § 63.147(d) of subpart G of this part, the recordkeeping requirements in § 63.1367 shall apply for the purposes of this subpart.

(6) When the Periodic report requirements contained in § 63.152(c) of subpart G of this part are referred to in §§ 63.146 and 63.147 of subpart G of this part, the Periodic report requirements contained in § 63.1368(g) shall apply for the purposes of this subpart.

(7) When the term “process wastewater” is referred to in §§ 63.132 through 63.147 of subpart G of this part, the term “wastewater” as defined in § 63.1361 shall apply for the purposes of this subpart.

(8) When the term “Group 1 wastewater stream” is used in §§ 63.132 through 63.147 of subpart G of this part, the definition of the term “Group 1 wastewater stream” in § 63.1361 shall apply for both new sources and existing sources for the purposes of this subpart.

(9) The requirements in §§ 63.132 through 63.147 for compounds listed on Table 8 of subpart G of this part shall not apply for the purposes of this subpart.

(10) When the total load of Table 9 compounds in the sum of all process wastewater from PAI process units at a new affected source is 2,100 Mg/yr (2,300 tons/yr) or more, the owner or operator shall reduce, by removal or destruction, the mass flow rate of all compounds in Table 9 of subpart G of this part in all wastewater (process and maintenance wastewater) by 99 percent or more. Alternatively, the owner or operator may treat the wastewater in a unit identified in and complying with § 63.138(h) of subpart G of this part. The removal/destruction efficiency shall be determined by the procedures specified in § 63.145(c) of subpart G of this part, for noncombustion processes, or § 63.145(d) of subpart G of this part, for combustion processes.

(11) The compliance date for the affected source subject to the provisions of this section is specified in § 63.1364.

(12) 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), the owner or operator may elect to use Method 25 or Method 25A of 40 CFR part 60, as specified in § 63.1365(b).

(13) The requirement to correct outlet concentrations from combustion devices to 3 percent oxygen in § 63.139(c)(1)(ii) shall apply only if supplemental gases are combined with affected vent streams, and the procedures in § 63.1365(a)(7)(i) apply instead of the procedures in § 63.145(i)(6) to determine the percent oxygen correction. If emissions are controlled with a vapor recovery system as specified in § 63.139(c)(2), the owner or operator must correct for supplemental gases as specified in § 63.1365(a)(7)(ii).

(14) As an alternative to the management and treatment options specified in § 63.132(g)(2), any Group 1 wastewater stream (or residual removed from a Group 1 wastewater stream) that contains less than 50 ppmw of HAP listed in Table 2 to subpart GGG of this part may be transferred offsite or to an on-site treatment operation not owned or operated by the owner or operator of the source generating the wastewater

(or residual) if the transferee manages and treats the wastewater stream or residual in accordance with paragraphs (d)(14)(i) through (iv) of this section.

(i) Treat the wastewater stream or residual in a biological treatment unit in accordance with §§ 63.138 and 63.145.

(ii) Cover the waste management units up to the activated sludge unit. Alternatively, covers are not required if the owner or operator demonstrates that less than 5 percent of the total HAP listed in Table 3 to subpart GGG of this part is emitted.

(iii) Inspect covers as specified in § 63.1366(h).

(iv) The reference in § 63.132(g)(2) to “§ 63.102(b) of subpart F” does not apply for the purposes of this subpart.

(15) When § 63.133 refers to Table 10 to subpart G of this part, the maximum true vapor pressures in the table shall be limited to the HAP listed in Table 9 to subpart G of this part.

(16) When the inspection, record-keeping, and reporting requirements contained in § 63.148 are referred to in §§ 63.132 through 63.147, the inspection requirements in § 63.1366(h), the record-keeping requirements in § 63.1367(f), and the reporting requirements in § 63.1368(g)(2)(iii) and (xi) shall apply for the purposes of this subpart.

(e) *Bag dumps and product dryers.* (1) The owner or operator shall reduce particulate matter emissions to a concentration not to exceed 0.01 gr/dscf from product dryers that dry a PAI or integral intermediate that is a HAP.

(2) The owner or operator shall reduce particulate matter emissions to a concentration not to exceed 0.01 gr/dscf from bag dumps that introduce to a PAI process unit a feedstock that is a solid material and a HAP, excluding bag dumps where the feedstock contains HAP only as impurities.

(3) Gaseous HAP emissions from product dryers and bag dumps shall be controlled in accordance with the provisions for process vent emissions in paragraph (b) of this section.

(f) *Heat exchange systems.* Unless one or more of the conditions specified in § 63.104(a)(1) through (6) of subpart F of this part are met, an owner or operator shall monitor each heat exchange system that is used to cool process equipment in PAI process units that are part

of an affected source as defined in § 63.1360(a) according to the provisions in either § 63.104(b) or (c) of subpart F of this part. When the term “chemical manufacturing process unit” is used in § 63.104(c) of subpart F of this part, the term “PAI process unit” shall apply for the purposes of this subpart. Whenever a leak is detected, the owner or operator shall comply with the requirements in § 63.104(d) of subpart F of this part. Delay of repair of heat exchange systems for which leaks have been detected is allowed in accordance with the provisions of § 63.104(e) of subpart F of this part.

(g) *Pollution prevention alternative.* Except as provided in paragraph (g)(1) of this section, for a process that has an initial startup before November 10, 1997, an owner or operator may choose to meet the pollution prevention alternative requirement specified in either paragraph (g)(2) or (3) of this section for any PAI process unit, in lieu of the requirements specified in paragraphs (b), (c), (d), and (e) of this section and in § 63.1363. Compliance with the requirements of paragraphs (g)(2) and (3) of this section shall be demonstrated through the procedures in §§ 63.1365(g) and 63.1366(f).

(1) A HAP must be controlled according to the requirements of paragraphs (b), (c), (d), and (e) of this section and § 63.1363 if it is generated in the PAI process unit or an associated control device and it is not part of the production-indexed HAP consumption factor (HAP factor).

(2) The HAP factor shall be reduced by at least 85 percent from a 3-year average baseline beginning no earlier than the 1987 through 1989 calendar years. Alternatively, for a process that has been operating for less than 3 years but more than 1 year, the baseline factor may be calculated for the time period from startup of the process until the present. For any reduction in the HAP factor achieved by reducing a HAP that is also a VOC, an equivalent reduction in the production-indexed VOC consumption factor (VOC factor) is also required (the equivalence is determined on a mass basis, not a percentage basis). For any reduction in the HAP factor that is achieved by re-

ducing a HAP that is not a VOC, the VOC factor may not be increased.

(3) As an alternative to the provisions in paragraph (g)(2) of this section, the owner or operator may combine pollution prevention with emissions control as specified in paragraphs (g)(3)(i) and (ii) of this section.

(i) The HAP factor shall be reduced as specified in paragraph (g)(2) of this section except that a reduction of at least 50 percent shall apply for the purposes of this paragraph.

(ii) The total annual HAP emissions from the PAI process unit shall be reduced by an amount that, when divided by the annual production rate and added to the reduction of the HAP factor yields a value of at least 85 percent of the baseline HAP factor. The total annual VOC emissions from the process unit must be reduced by an amount equivalent to the reduction in HAP emissions for each HAP that is a VOC (the equivalence is determined on a mass basis). For HAP emissions reductions that are achieved by reducing a HAP that is not a VOC, the total annual VOC emissions may not be increased. The reduction in HAP air emissions must be achieved using one of the following control devices:

(A) Combustion control devices such as incinerators, flares, or process heaters.

(B) Control devices such as condensers and carbon adsorbers whose recovered product is destroyed or shipped offsite for destruction.

(C) Any control device that does not ultimately allow for recycling of material back to the PAI process unit.

(D) Any control device for which the owner or operator can demonstrate that the use of the device in controlling HAP emissions will have no effect on the HAP factor for the PAI process unit.

(h) *Emissions averaging provisions.* Except as provided in paragraphs (h)(1) through (7) of this section, the owner or operator of an existing affected facility may choose to comply with the emission standards in paragraphs (b), (c), and (d) of this section by using emissions averaging procedures specified in § 63.1365(h) for organic HAP emissions from any storage vessel, process, or waste management unit

that is part of an affected source subject to this subpart.

(1) A State may restrict the owner or operator of an existing source to use only the procedures in paragraphs (b), (c), and (d) of this section to comply with the emission standards where State authorities prohibit averaging of HAP emissions.

(2) Group 1 emission points that are controlled as specified in paragraphs (h)(2)(i) through (iii) of this section may not be used to calculate emissions averaging credits, unless the equipment is approved for use in a different manner from that specified in paragraphs (b) through (d) of this section, and a nominal efficiency has been assigned according to the procedures in § 63.150(i). The nominal efficiency must exceed the percent reduction required by paragraphs (b) and (c) of this section for process vents and storage vessels, respectively, exceed the percent reduction required in § 63.139(c) for control devices used to control emissions vented from waste management units, and exceed the percent reduction required in § 63.138(e) or (f) for wastewater treatment processes.

(i) Storage vessels controlled with an internal floating roof meeting the specifications of § 63.119(b), an external floating roof meeting the specifications of § 63.119(c), or an external floating roof converted to an internal floating meeting the specifications of § 63.119(d).

(ii) Emission points controlled with a flare.

(iii) Wastewater streams that are managed in waste management units that are controlled as specified in §§ 63.133 through 63.137, treated using a steam stripper meeting the specifications of § 63.138(d), and emissions from the steam stripper are controlled in a control device that meets the percent reduction requirements specified in § 63.139(c).

(3) Process vents and storage vessels controlled with a control device to an outlet concentration of 20 ppmv or 50 ppmv, as specified in paragraph (b)(2)(iv)(A), (b)(3)(ii), (b)(6), (c)(2)(iv)(B), or (c)(4) of this section, and wastewater streams controlled in a treatment unit to an outlet concentration of 50 ppmw, may not be used in any averaging group.

(4) Maintenance wastewater streams, wastewater streams treated in biological treatment units, and Group 2 wastewater streams that are not managed as specified in §§ 63.133 through 63.137 may not be included in any averaging group.

(5) Processes which have been permanently shut down and storage vessels permanently taken out of HAP service may not be included in any averaging group.

(6) Emission points already controlled on or before November 15, 1990 may not be used to generate emissions averaging credits, unless the level of control has been increased after November 15, 1990. In these cases, credit will be allowed only for the increase in control after November 15, 1990.

(7) Emission points controlled to comply with a State or Federal rule other than this subpart may not be included in an emissions averaging group, unless the level of control has been increased after November 15, 1990, above what is required by the other State or Federal rule. Only the control above what is required by the other State or Federal rule will be credited. However, if an emission point has been used to generate emissions averaging credit in an approved emissions average, and the point is subsequently made subject to a State or Federal rule other than this subpart, the point can continue to generate emissions averaging credit for the purpose of complying with the previously approved average.

(i) *Opening of a safety device.* The owner or operator that opens a safety device, as defined in § 63.1361, is not exempt from applicable standards in order to avoid unsafe conditions. If opening a safety device results in the failure to meet any applicable standard, the owner or operator must still comply with the general duty to minimize emissions. If opening a safety device results in a deviation or excess emissions, such events must be reported as specified in § 63.1368(i). If the owner or operator attributes the event to a malfunction and intends to assert an affirmative defense, the owner or operator is subject to § 63.1360(k).

(j) *Closed-vent systems.* The owner or operator of a closed-vent system that

contains bypass lines that could divert a vent stream away from a control device used to comply with the requirements in paragraphs (b) through (d) of this section shall comply with the requirements of Table 3 of this subpart and paragraph (j)(1) or (2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, rupture disks and pressure relief valves needed for safety purposes are not subject to this paragraph.

(1) Install, calibrate, maintain, and operate a flow indicator that is capable of determining whether vent stream flow is present and taking frequent, periodic readings. Records shall be maintained as specified in § 63.1367(f)(1). The flow indicator shall be installed at the entrance to any bypass line that could divert the vent stream away from the control device to the atmosphere; or

(2) Secure the bypass line valve in the closed position with a car-seal or lock-and-key type configuration. Records shall be maintained as specified in § 63.1367(f)(2).

(k) *Control requirements for certain liquid streams in open systems within a PAI process unit.* (1) The owner or operator shall comply with the provisions of Table 4 of this subpart, for each item of equipment meeting all the criteria specified in paragraphs (k)(2) through (4) of this section and either paragraph (k)(5)(i) or (ii) of this section.

(2) The item of equipment is of a type identified in Table 4 of this subpart;

(3) The item of equipment is part of a PAI process unit as defined in § 63.1361;

(4) The item of equipment is controlled less stringently than in Table 4 of this subpart, and the item of equipment is not otherwise exempt from controls by the provisions of this subpart or subpart A of this part;

(5) The item of equipment:

(i) Is a drain, drain hub, manhole, lift station, trench, pipe, or oil/water separator that conveys water with a total annual average concentration greater than or equal to 10,000 ppm by weight of compounds in Table 9 of subpart G of this part at any flowrate; or a total annual average concentration greater than or equal to 1,000 ppm by weight of compounds in Table 9 of subpart G of

this part at an annual average flow rate greater than or equal to 10 liters per minute; or

(ii) Is a tank that receives one or more streams that contain water with a total annual average concentration greater than or equal to 1,000 ppm by weight of compounds in Table 9 of subpart G of this part at an annual average flowrate greater than or equal to 10 liters per minute. The owner or operator of the source shall determine the characteristics of the stream as specified in paragraphs (k)(5)(ii)(A) and (B) of this section.

(A) The characteristics of the stream being received shall be determined at the inlet to the tank.

(B) The characteristics shall be determined according to the procedures in § 63.144(b) and (c) of subpart G of this part.

(1) *Exemption for RCRA treatment units.* An owner or operator shall be exempt from the initial compliance demonstrations and monitoring provisions in §§ 63.1365 and 63.1366 and the associated recordkeeping and reporting requirements in §§ 63.1367 and 63.1368 for emissions from process vents, storage vessels, and waste management units that are discharged to the following devices:

(1) A boiler or process heater burning hazardous waste for which the owner or operator:

(i) Has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 266, subpart H; or

(ii) Has certified compliance with the interim status requirements of 40 CFR part 266, subpart H.

(2) A hazardous waste incinerator for which the owner or operator has been issued a final permit under 40 CFR part 270 and complies with the requirements of 40 CFR part 264, subpart O, or has certified compliance with the interim status requirements of 40 CFR part 265, subpart O.

[64 FR 33589, June 23, 1999, as amended at 67 FR 59343, Sept. 20, 2002; 68 FR 37358, June 23, 2003; 79 FR 17372, Mar. 27, 2014]

§ 63.1363 Standards for equipment leaks.

(a) *General equipment leak requirements.* (1) The provisions of this section

apply to “equipment” as defined in § 63.1361. The provisions of this section also apply to any closed-vent systems and control devices required by this section.

(2) *Consistency with other regulations.* After the compliance date for a process, equipment subject to both this section and either of the following will be required to comply only with the provisions of this subpart:

(i) 40 CFR part 60.

(ii) 40 CFR part 61.

(3) [Reserved]

(4) The provisions in § 63.1(a)(3) of subpart A of this part do not alter the provisions in paragraph (a)(2) of this section.

(5) Lines and equipment not containing process fluids are not subject to the provisions of this section. Utilities, and other nonprocess lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not considered to be part of a process.

(6) 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 MMM.

(7) Each piece of equipment to which this section applies shall be identified such that it can be distinguished readily from equipment that is not subject to this section. Identification of the equipment does not require physical tagging of the equipment. For example, the equipment may be identified on a plant site plan, in log entries, or by designation of process boundaries by some form of weatherproof identification. If changes are made to the affected source subject to the leak detection requirements, equipment identification for each type of component shall be updated, if needed, within 15 calendar days of the end of each monitoring period for that component.

(8) Equipment that is in vacuum service is excluded from the requirements of this section.

(9) Equipment that is in organic HAP service, but is in such service less than 300 hours per calendar year, is excluded from the requirements of this section if it is identified as required in paragraph (g)(9) of this section.

(10) When each leak is detected by visual, audible, or olfactory means, or by monitoring as described in § 63.180(b) or (c) of subpart H of this part, the following requirements apply:

(i) A weatherproof and readily visible identification, marked with the equipment identification number, shall be attached to the leaking equipment.

(ii) The identification on a valve in light liquid or gas/vapor service may be removed after it has been monitored as specified in paragraph (e)(7)(iii) of this section, and no leak has been detected during the follow-up monitoring. If an owner or operator elects to comply with § 63.174(c)(1)(i), the identification on a connector may be removed after it has been monitored as specified in § 63.174(c)(1)(i) and no leak is detected during that monitoring.

(iii) The identification on equipment, except as specified in paragraph (a)(10)(ii) of this section, may be removed after it has been repaired.

(b) *References.* The owner or operator shall comply with the provisions of subpart H of this part as specified in paragraphs (b)(1) through (3) of this section and with paragraph (b)(4) of this section for pressure relief devices. When the term “process unit” is used in subpart H of this part, it shall mean any group of processes for the purposes of this subpart. Groups of processes as used in this subpart may be any individual process or combination of processes.

(1) Sections 63.160, 63.161, 63.162, 63.163, 63.167, 63.168, 63.170, 63.173, 63.175, 63.176, 63.181, and 63.182 of subpart H of this part shall not apply for the purposes of this subpart MMM. The owner or operator shall comply with the provisions specified in paragraphs (b)(1)(i) through (viii) of this section.

(i) Sections 63.160 and 63.162 of subpart H of this part shall not apply, instead the owner or operator shall comply with paragraph (a) of this section;

(ii) Section 63.161 of subpart H of this part shall not apply, instead the owner or operator shall comply with § 63.1361;

(iii) Sections 63.163 and 63.173 of subpart H of this part shall not apply, instead the owner or operator shall comply with paragraph (c) of this section;

(iv) Section 63.167 of subpart H of this part shall not apply, instead the owner

or operator shall comply with paragraph (d) of this section;

(v) Section 63.168 of subpart H of this part shall not apply, instead the owner or operator shall comply with paragraph (e) of this section;

(vi) Section 63.170 of subpart H of this part shall not apply, instead the owner or operator shall comply with § 63.1362(b);

(vii) Section 63.181 of subpart H of this part shall not apply, instead the owner or operator shall comply with paragraph (g) of this section; and

(viii) Section 63.182 of subpart H of this part shall not apply, instead the owner or operator shall comply with paragraph (h) of this section.

(2) The owner or operator shall comply with §§ 63.164, 63.166, 63.169, 63.177, and 63.179 of subpart H of this part in their entirety, except that when these sections reference other sections of subpart H of this part, the owner or operator shall comply with the revised sections as specified in paragraphs (b)(1), (3), and (4) of this section. Section 63.164 of subpart H of this part applies to compressors. Section 63.166 of subpart H of this part applies to sampling connection systems. Section 63.169 of subpart H of this part applies to: pumps, valves, connectors, and agitators in heavy liquid service; instrumentation systems; and pressure relief devices in liquid service. Section 63.177 of subpart H of this part applies to general alternative means of emission limitation. Section 63.179 of subpart H of this part applies to alternative means of emission limitation for enclosed-vented process units.

(3) The owner or operator shall comply with §§ 63.171, 63.172, 63.174, 63.178, and 63.180 of subpart H of this part with the differences specified in paragraphs (b)(3)(i) through (v) of this section.

(i) Section 63.171, Delay of repair, shall apply except § 63.171(a) shall not apply. Delay of repair of equipment for which leaks have been detected is allowed if one of the following conditions exist:

(A) The repair is technically infeasible without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown.

(B) The owner or operator determines that repair personnel would be exposed to an immediate danger if attempting to repair without a process shutdown. Repair of this equipment shall occur by the end of the next scheduled process shutdown.

(ii) Section 63.172, Closed-vent systems and control devices, shall apply for closed-vent systems used to comply with this section, and for control devices used to comply with this section only, except:

(A) Section 63.172(k) and (l) shall not apply. The owner or operator shall instead comply with paragraph (f) of this section.

(B) Owners or operators may, instead of complying with the provisions of § 63.172(f), design a closed-vent system to operate at a pressure below atmospheric pressure. The system shall be equipped with at least one pressure gauge or other pressure measurement device that can be read from a readily accessible location to verify that negative pressure is being maintained in the closed-vent system when the associated control device is operating.

(iii) Section 63.174, Connectors, shall apply except:

(A) Section 63.174(b), (f), (g), and (h) shall not apply. In place of § 63.174(b), the owner or operator shall comply with paragraphs (b)(3)(iii)(C) through (G) of this section. In place of § 63.174(f), (g), and (h), the owner or operator shall comply with paragraph (f) of this section.

(B) Days that the connectors are not in organic HAP service shall not be considered part of the 3-month period in § 63.174(c).

(C) If the percent leaking connectors in a group of processes was greater than or equal to 0.5 percent during the initial monitoring period, monitoring shall be performed once per year until the percent leaking connectors is less than 0.5 percent.

(D) If the percent leaking connectors in the group of processes was less than 0.5 percent, but equal to or greater than 0.25 percent, during the last required monitoring period, monitoring shall be performed once every 4 years. An owner or operator may comply with the requirements of this paragraph by monitoring at least 40 percent of the

connectors in the first 2 years and the remainder of the connectors within the next 2 years. The percent leaking connectors will be calculated for the total of all monitoring performed during the 4-year period.

(E) The owner or operator shall increase the monitoring frequency to once every 2 years for the next monitoring period if leaking connectors comprise at least 0.5 percent but less than 1.0 percent of the connectors monitored within either the 4 years specified in paragraph (b)(3)(iii)(D) of this section, the first 4 years specified in paragraph (b)(3)(iii)(G) of this section, or the entire 8 years specified in paragraph (b)(3)(iii)(G) of this section. At the end of that 2-year monitoring period, the owner or operator shall monitor once per year while the percent leaking connectors is greater than or equal to 0.5 percent; if the percent leaking connectors is less than 0.5 percent, the owner or operator may again elect to monitor in accordance with paragraph (b)(3)(iii)(D) or (G) of this section, as applicable.

(F) If an owner or operator complying with the requirements of paragraph (b)(3)(iii)(D) or (G) of this section for a group of processes determines that 1 percent or greater of the connectors are leaking, the owner or operator shall increase the monitoring frequency to one time per year. The owner or operator may again elect to use the provisions of paragraph (b)(3)(iii)(D) or (G) of this section after a monitoring period in which less than 0.5 percent of the connectors are determined to be leaking.

(G) Monitoring shall be required once every 8 years, if the percent leaking connectors in the group of process units was less than 0.25 percent during the last required monitoring period. An owner or operator shall monitor at least 50 percent of the connectors in the first 4 years and the remainder of the connectors within the next 4 years. If the percent leaking connectors in the first 4 years is equal to or greater than 0.35 percent, the monitoring program shall revert at that time to the appropriate monitoring frequency specified in paragraph (b)(3)(iii)(D), (E), or (F) of this section.

(iv) Section 63.178, shall apply, except as specified in paragraphs (b)(3)(iv)(A) and (B) of this section.

(A) Section 63.178(b), requirements for pressure testing, shall apply to all processes, not just batch processes.

(B) For pumps, the phrase “at the frequencies specified in Table 1 of this subpart” in § 63.178(c)(3)(iii) shall mean “quarterly” for the purposes of this subpart.

(v) Section 63.180 of subpart H of this part, Test methods and procedures, shall apply except § 63.180(b)(4)(ii)(A) through (C) of subpart H of this part shall not apply. Calibration gases shall be a mixture of methane and air at a concentration of approximately, but less than, 10,000 parts per million methane for agitators, 2,000 parts per million for pumps, and 500 parts per million for all other equipment, except as provided in § 63.180(b)(4)(iii) of subpart H of this part.

(4) *Requirements for pressure relief devices.* Except as specified in paragraph (b)(4)(iv) of this section, the owner or operator must comply with the operating and pressure release requirements specified in paragraphs (b)(4)(i) and (ii) of this section for pressure relief devices in organic HAP gas or vapor service. Except as specified in paragraph (b)(4)(iv) of this section, the owner or operator must also comply with the pressure release management requirements specified in paragraph (b)(4)(iii) of this section for all pressure relief devices in organic HAP service.

(i) *Operating requirements.* Except during a pressure release event, operate each pressure relief device in organic HAP gas or vapor service with an instrument reading of less than 500 ppm above background as detected by Method 21 of 40 CFR part 60, appendix A.

(ii) *Pressure release requirements.* For pressure relief devices in organic HAP gas or vapor service, comply with paragraphs (b)(4)(ii)(A) or (B) of this section, as applicable.

(A) If the pressure relief device does not consist of or include a rupture disk, conduct instrument monitoring, as detected by Method 21 of 40 CFR part 60, appendix A, no later than 5 calendar days after the pressure release to verify that the pressure relief device is operating with an instrument reading

of less than 500 ppm above background, except as provided in § 63.171.

(B) If the pressure relief device consists of or includes 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, except as provided in § 63.171.

(iii) *Pressure release management.* Except as specified in paragraph (b)(4)(iv) of this section, pressure releases to the atmosphere from pressure relief devices in organic HAP service are prohibited, and the owner or operator must comply with the requirements specified in paragraphs (b)(4)(iii)(A) and (B) of this section for all pressure relief devices in organic HAP service.

(A) For each pressure relief device in organic HAP service, the owner or operator must equip each pressure relief device with a device(s) or use a monitoring system that is capable of:

(1) Identifying the pressure release;

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

(3) Notifying operators immediately that a pressure release is occurring. The device or monitoring system may be either specific to the pressure relief device itself or may 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.

(B) If any pressure relief device in organic HAP service releases to atmosphere as a result of a pressure release event, the owner or operator must calculate the quantity of organic HAP released during each pressure release event and report this quantity as required in paragraph (h)(3)(v) of this section. 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) *Pressure relief devices routed to a control device, process, or drain system.* If a pressure relief device in organic HAP service is designed and operated to route all pressure releases through a closed vent system to a control device,

process, or drain system, the owner or operator is not required to comply with paragraphs (b)(4)(i), (ii), or (iii) (if applicable) of this section. Both the closed vent system and control device (if applicable) must meet the requirements of § 63.172. The drain system (if applicable) must meet the requirements of § 63.136.

(c) *Standards for pumps in light liquid service and agitators in gas/vapor service and in light liquid service.* (1) The provisions of this section apply to each pump that is in light liquid service, and to each agitator in gas/vapor service or in light liquid service.

(2)(i) *Monitoring.* Each pump and agitator subject to this section shall be monitored quarterly to detect leaks by the method specified in § 63.180(b), except as provided in §§ 63.177, 63.178, paragraph (f) of this section, and paragraphs (c)(5) through (9) of this section.

(ii) *Leak definition.* The instrument reading, as determined by the method as specified in § 63.180(b) of subpart H of this part, that defines a leak is:

(A) For agitators, an instrument reading of 10,000 parts per million or greater.

(B) For pumps, an instrument reading of 2,000 parts per million or greater.

(iii) *Visual inspections.* Each pump and agitator shall be checked by visual inspection each calendar week for indications of liquids dripping from the pump or agitator seal. If there are indications of liquids dripping from the seal at the time of the weekly inspection, the owner or operator shall follow the procedure specified in either paragraph (c)(2)(iii)(A) or (B) of this section prior to the next weekly inspection.

(A) The owner or operator shall monitor the pump or agitator by the method specified in § 63.180(b). If the instrument reading indicates a leak as specified in paragraph (c)(2)(ii) of this section, a leak is detected.

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(3) *Repair provisions.* (i) When a leak is detected pursuant to paragraph (c)(2)(i), (c)(2)(iii)(A), (c)(5)(iv)(A), or (c)(5)(vi)(B) of this section, it shall be repaired as soon as practicable, but not later than 15 calendar days after it is

detected, except as provided in paragraph (b)(3)(i) of this section.

(ii) A first attempt at repair shall be made no later than 5 calendar days after the leak is detected. First attempts at repair include, but are not limited to, the following practices where practicable:

(A) Tightening of packing gland nuts.

(B) Ensuring that the seal flush is operating at design pressure and temperature.

(4) *Calculation of percent leakers.* (i) The owner or operator shall decide no later than the end of the first monitoring period what groups of processes will be developed. Once the owner or operator has decided, all subsequent percent calculations shall be made on the same basis.

(ii) If, calculated on a 1-year rolling average, 10 percent or more of the pumps in a group of processes (or 3 pumps in a group of processes with fewer than 30 pumps) leak, the owner or operator shall monitor each pump once per month, until the calculated 1-year rolling average value drops below 10 percent (or three pumps in a group of processes with fewer than 30 pumps).

(iii) The number of pumps in a group of processes shall be the sum of all the pumps in organic HAP service, except that pumps found leaking in a continuous process within 1 quarter after startup of the pump shall not count in the percent leaking pumps calculation for that one monitoring period only.

(iv) Percent leaking pumps shall be determined using Equation 3 of this subpart:

$$\%P_L = \left[\frac{(P_L - P_S)}{(P_T - P_S)} \right] \times 100 \quad (\text{Eq. 3})$$

Where:

$\%P_L$ = percent leaking pumps

P_L = number of pumps found leaking as determined through quarterly monitoring as required in paragraphs (c)(2)(i) and (ii) of this section.

P_T = total pumps in organic HAP service, including those meeting the criteria in paragraphs (c)(5) and (6) of this section

P_S = number of pumps in a continuous process leaking within 1 quarter of startup during the current monitoring period

(5) *Exemptions.* Each pump or agitator equipped with a dual mechanical seal system that includes a barrier fluid system and meets the requirements specified in paragraphs (c)(5)(i) through (vii) is exempt from the requirements of paragraphs (c)(1) through (c)(4)(iii) of this section, except as specified in paragraphs (c)(5)(iv)(A) and (vii) of this section.

(i) Each dual mechanical seal system is:

(A) Operated with the barrier fluid at a pressure that is at all times greater than the pump/agitator stuffing box pressure; or

(B) Equipped with a barrier fluid degassing reservoir that is connected by a closed-vent system to a control device that complies with the require-

ments of paragraph (b)(3)(ii) of this section; or

(C) Equipped with a closed-loop system that purges the barrier fluid into a process stream.

(ii) The barrier fluid is not in light liquid service.

(iii) Each barrier fluid system is equipped with a sensor that will detect failure of the seal system, the barrier fluid system, or both.

(iv) Each pump/agitator is checked by visual inspection each calendar week for indications of liquids dripping from the pump/agitator seal. If there are indications of liquids dripping from the pump or agitator seal at the time of the weekly inspection, the owner or operator shall follow the procedures specified in either paragraph (c)(5)(iv)(A) or (B) of this section prior to the next required inspection.

(A) The owner or operator shall monitor the pump or agitator using the method specified in §63.180(b) to determine if there is a leak of organic HAP in the barrier fluid. If the instrument reading indicates a leak, as specified in paragraph (c)(2)(ii) of this section, a leak is detected.

(B) The owner or operator shall eliminate the visual indications of liquids dripping.

(v) Each sensor as described in paragraph (c)(5)(iii) of this section is observed daily or is equipped with an alarm unless the pump is located within the boundary of an unmanned plant site.

(vi)(A) The owner or operator determines, based on design considerations and operating experience, criteria applicable to the presence and frequency of drips and to the sensor that indicate failure of the seal system, the barrier fluid system, or both.

(B) If indications of liquids dripping from the pump/agitator seal exceed the criteria established in paragraph (c)(5)(vi)(A) of this section, or if, based on the criteria established in paragraph (c)(5)(vi)(A) of this section, the sensor indicates failure of the seal system, the barrier fluid system, or both, a leak is detected.

(vii) When a leak is detected pursuant to paragraph (c)(5)(iv)(A) or (vi)(B) of this section, the leak must be repaired as specified in paragraph (c)(3) of this section.

(6) Any pump/agitator that is designed with no externally actuated shaft penetrating the pump/agitator housing is exempt from the requirements of paragraphs (c)(1) through (3) of this section.

(7) Any pump/agitator equipped with a closed-vent system capable of capturing and transporting any leakage from the seal or seals back to the process or to a control device that complies with the requirements of paragraph (b)(3)(ii) of this section is exempt from the requirements of paragraphs (c)(2) through (5) of this section.

(8) Any pump/agitator that is located within the boundary of an unmanned plant site is exempt from the weekly visual inspection requirement of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, and the daily requirements of paragraph (c)(5)(v) of this section, provided that each pump/agitator is visually inspected as often as practicable and at least monthly.

(9) If more than 90 percent of the pumps in a group of processes meet the criteria in either paragraph (c)(5) or (6) of this section, the group of processes

is exempt from the requirements of paragraph (c)(4) of this section.

(d) *Standards: open-ended valves or lines.* (1)(i) Each open-ended valve or line shall be equipped with a cap, blind flange, plug, or a second valve, except as provided in §63.177 of subpart H of this part and paragraphs (d)(4) through (6) of this section.

(ii) The cap, blind flange, plug, or second valve shall seal the open end at all times except during operations requiring process fluid flow through the open-ended valve or line, or during maintenance or repair. The cap, blind flange, plug, or second valve shall be in place within 1 hour of cessation of operations requiring process fluid flow through the open-ended valve or line, or within 1 hour of cessation of maintenance or repair.

(2) Each open-ended valve or line equipped with a second valve shall be operated in a manner such that the valve on the process fluid end is closed before the second valve is closed.

(3) When a double block and bleed system is being used, the bleed valve or line may remain open during operations that require venting the line between the block valves but shall comply with paragraph (d)(1) of this section at all other times.

(4) Open-ended valves or lines in an emergency shutdown system which are designed to open automatically in the event of a process upset are exempt from the requirements of paragraphs (d)(1) through (3) of this section.

(5) Open-ended valves or lines containing materials which would autocatalytically polymerize are exempt from the requirements of paragraphs (d)(1) through (3) of this section.

(6) Open-ended valves or lines containing materials which could cause an explosion, serious overpressure, or other safety hazard if capped or equipped with a double block and bleed system as specified in paragraphs (d)(1) through (3) of this section are exempt from the requirements of paragraphs (d)(1) through (3) of this section.

(e) *Standards: valves in gas/vapor service and in light liquid service.* (1) The provisions of this section apply to valves that are either in gas/vapor service or in light liquid service.

(2) For existing and new affected sources, all valves subject to this section shall be monitored, except as provided in paragraph (f) of this section and in § 63.177 of subpart H of this part, by no later than 1 year after the compliance date.

(3) *Monitoring.* The owner or operator of a source subject to this section shall monitor all valves, except as provided in paragraph (f) of this section and in § 63.177 of subpart H of this part, at the intervals specified in paragraph (e)(4) of this section and shall comply with all other provisions of this section, except as provided in paragraph (b)(3)(i) of this section and §§ 63.178 and 63.179 of subpart H of this part.

(i) The valves shall be monitored to detect leaks by the method specified in § 63.180(b) of subpart H of this part.

(ii) An instrument reading of 500 parts per million or greater defines a leak.

(4) *Subsequent monitoring frequencies.* After conducting the initial survey required in paragraph (e)(2) of this section, the owner or operator shall monitor valves for leaks at the intervals specified below:

(i) For a group of processes with 2 percent or greater leaking valves, calculated according to paragraph (e)(6) of this section, the owner or operator shall monitor each valve once per month, except as specified in paragraph (e)(9) of this section.

(ii) For a group of processes with less than 2 percent leaking valves, the owner or operator shall monitor each valve once each quarter, except as provided in paragraphs (e)(4)(iii) through (v) of this section.

(iii) For a group of processes with less than 1 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 quarters.

(iv) For a group of processes with less than 0.5 percent leaking valves, the owner or operator may elect to monitor each valve once every 4 quarters.

(v) For a group of processes with less than 0.25 percent leaking valves, the owner or operator may elect to monitor each valve once every 2 years.

(5) *Calculation of percent leakers.* For a group of processes to which this subpart applies, the owner or operator may choose to subdivide the valves in

the applicable group of processes and apply the provisions of paragraph (e)(4) of this section to each subgroup. If the owner or operator elects to subdivide the valves in the applicable group of processes, then the provisions of paragraphs (e)(5)(i) through (viii) of this section apply.

(i) The overall performance of total valves in the applicable group of processes must be less than 2 percent leaking valves, as detected according to paragraphs (e)(3)(i) and (ii) of this section and as calculated according to paragraphs (e)(6)(ii) and (iii) of this section.

(ii) The initial assignment or subsequent reassignment of valves to subgroups shall be governed by the provisions of paragraphs (e)(5)(ii) (A) through (C) of this section.

(A) The owner or operator shall determine which valves are assigned to each subgroup. Valves with less than 1 year of monitoring data or valves not monitored within the last 12 months must be placed initially into the most frequently monitored subgroup until at least 1 year of monitoring data have been obtained.

(B) Any valve or group of valves can be reassigned from a less frequently monitored subgroup to a more frequently monitored subgroup provided that the valves to be reassigned were monitored during the most recent monitoring period for the less frequently monitored subgroup. The monitoring results must be included with the less frequently monitored subgroup's monitoring event and associated next percent leaking valves calculation for that group.

(C) Any valve or group of valves can be reassigned from a more frequently monitored subgroup to a less frequently monitored subgroup provided that the valves to be reassigned have not leaked for the period of the less frequently monitored subgroup (e.g., for the last 12 months, if the valve or group of valves is to be reassigned to a subgroup being monitored annually). Nonrepairable valves may not be reassigned to a less frequently monitored subgroup.

(iii) The owner or operator shall determine every 6 months if the overall

performance of total valves in the applicable group of processes is less than 2 percent leaking valves and so indicate the performance in the next Periodic report. If the overall performance of total valves in the applicable group of processes is 2 percent leaking valves or greater, the owner or operator shall revert to the program required in paragraphs (e)(2) through (4) of this section. The overall performance of total valves in the applicable group of processes shall be calculated as a weighted average of the percent leaking valves of each subgroup according to Equation 4 of this subpart:

$$\%V_{LO} = \frac{\sum_{i=1}^n (\%V_{Li} \times V_i)}{\sum_{i=1}^n V_i} \quad (\text{Eq. 4})$$

Where:

- $\%V_{LO}$ = overall performance of total valves in the applicable group of processes
- $\%V_{Li}$ = percent leaking valves in subgroup i, most recent value calculated according to the procedures in paragraphs (e)(6)(ii) and (iii) of this section
- V_i = number of valves in subgroup i
- n = number of subgroups

(iv) *Records.* In addition to records required by paragraph (g) of this section, the owner or operator shall maintain records specified in paragraphs (e)(5)(iv)(A) through (D) of this section.

(A) Which valves are assigned to each subgroup,

(B) Monitoring results and calculations made for each subgroup for each monitoring period,

(C) Which valves are reassigned and when they were reassigned, and

(D) The results of the semiannual overall performance calculation required in paragraph (e)(5)(iii) of this section.

(v) The owner or operator shall notify the Administrator no later than 30 days prior to the beginning of the next monitoring period of the decision to subgroup valves. The notification shall identify the participating processes and the valves assigned to each subgroup.

(vi) *Semiannual reports.* In addition to the information required by paragraph (h)(3) of this section, the owner or oper-

ator shall submit in the Periodic reports the information specified in paragraphs (e)(5)(vi)(A) and (B) of this section.

(A) Valve reassignments occurring during the reporting period, and

(B) Results of the semiannual overall performance calculation required by paragraph (e)(5)(iii) of this section.

(vii) To determine the monitoring frequency for each subgroup, the calculation procedures of paragraph (e)(6)(iii) of this section shall be used.

(viii) Except for the overall performance calculations required by paragraphs (e)(5)(i) and (iii) of this section, each subgroup shall be treated as if it were a process for the purposes of applying the provisions of this section.

(6)(i) The owner or operator shall decide no later than the implementation date of this subpart or upon revision of an operating permit how to group the processes. Once the owner or operator has decided, all subsequent percentage calculations shall be made on the same basis.

(ii) Percent leaking valves for each group of processes or subgroup shall be determined using Equation 5 of this subpart:

$$\%V_L = [V_L/V_T] \times 100 \quad (\text{Eq. 5})$$

Where:

- $\%V_L$ = percent leaking valves
- V_L = number of valves found leaking excluding nonrepairables as provided in paragraph (e)(6)(iv)(A) of this section
- V_T = total valves monitored, in a monitoring period excluding valves monitored as required by paragraph (e)(7)(iii) of this section

(iii) When determining monitoring frequency for each group of processes or subgroup subject to monthly, quarterly, or semiannual monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last two monitoring periods. When determining monitoring frequency for each group of processes or subgroup subject to annual or biennial (once every 2 years) monitoring frequencies, the percent leaking valves shall be the arithmetic average of the percent leaking valves from the last three monitoring periods.

(iv)(A) Nonrepairable valves shall be included in the calculation of percent leaking valves the first time the valve is identified as leaking and nonrepairable and as required to comply with paragraph (e)(6)(iv)(B) of this section. Otherwise, a number of nonrepairable valves (identified and included in the percent leaking calculation in a previous period) up to a maximum of 1 percent of the total number of valves in organic HAP service at a process may be excluded from calculation of percent leaking valves for subsequent monitoring periods.

(B) If the number of nonrepairable valves exceeds 1 percent of the total number of valves in organic HAP service at a process, the number of nonrepairable valves exceeding 1 percent of the total number of valves in organic HAP service shall be included in the calculation of percent leaking valves.

(7) *Repair provisions.* (i) When a leak is detected, it shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section.

(ii) A first attempt at repair shall be made no later than 5 calendar days after each leak is detected.

(iii) When a leak is repaired, the valve shall be monitored at least once within the first 3 months after its repair. Days that the valve is not in organic HAP service shall not be considered part of this 3-month period. The monitoring required by this paragraph is in addition to the monitoring required to satisfy the definitions of “repaired” and “first attempt at repair.”

(A) The monitoring shall be conducted as specified in §63.180(b) and (c) as appropriate, to determine whether the valve has resumed leaking.

(B) Periodic monitoring required by paragraphs (e)(2) through (4) of this section may be used to satisfy the requirements of paragraph (e)(7)(iii) of this section, if the timing of the monitoring period coincides with the time specified in paragraph (e)(7)(iii) of this section. Alternatively, other monitoring may be performed to satisfy the requirements of paragraph (e)(7)(iii) of this section, regardless of whether the timing of the monitoring period for periodic monitoring coincides with the

time specified in paragraph (e)(7)(iii) of this section.

(C) If a leak is detected by monitoring that is conducted pursuant to paragraph (e)(7)(iii) of this section, the owner or operator shall follow the provisions of paragraphs (e)(7)(iii)(C)(1) and (2) of this section to determine whether that valve must be counted as a leaking valve for purposes of paragraph (e)(6) of this section.

(1) If the owner or operator elects to use periodic monitoring required by paragraphs (e)(2) through (4) of this section to satisfy the requirements of paragraph (e)(7)(iii) of this section, then the valve shall be counted as a leaking valve.

(2) If the owner or operator elects to use other monitoring prior to the periodic monitoring required by paragraphs (e)(2) through (4) of this section to satisfy the requirements of paragraph (e)(7)(iii) of this section, then the valve shall be counted as a leaking valve unless it is repaired and shown by periodic monitoring not to be leaking.

(8) First attempts at repair include, but are not limited to, the following practices where practicable:

- (i) Tightening of bonnet bolts,
- (ii) Replacement of bonnet bolts,
- (iii) Tightening of packing gland nuts, and
- (iv) Injection of lubricant into lubricated packing.

(9) Any equipment located at a plant site with fewer than 250 valves in organic HAP service in the affected source is exempt from the requirements for monthly monitoring specified in paragraph (e)(4)(i) of this section. Instead, the owner or operator shall monitor each valve in organic HAP service for leaks once each quarter, or comply with paragraph (e)(4)(iii), (iv), or (v) of this section, except as provided in paragraph (f) of this section.

(f) *Unsafe to monitor, difficult-to-monitor, and inaccessible equipment.* (1) Equipment that is designated as unsafe-to-monitor, difficult-to-monitor, or inaccessible is exempt from the requirements as specified in paragraphs (f)(1)(i) through (iv) of this section provided the owner or operator meets the requirements specified in paragraph

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(f)(2), (3), or (4) of this section, as applicable. All equipment, except connectors that meet the requirements in paragraph (f)(4) of this section, must be assigned to a group of processes. Ceramic or ceramic-lined connectors are subject to the same requirements as inaccessible connectors.

(i) For pumps and agitators, paragraphs (c)(2), (3), and (4) of this section do not apply.

(ii) For valves, paragraphs (e)(2) through (7) of this section do not apply.

(iii) For connectors, § 63.174(b) through (e) and paragraphs (b)(3)(iii)(C) through (G) of this section do not apply.

(iv) For closed-vent systems, § 63.172(f)(1), (f)(2), and (g) do not apply.

(2) *Equipment that is unsafe-to-monitor.*

(i) Valves, connectors, agitators, and any part of closed-vent systems may be designated as unsafe-to-monitor if the owner or operator determines that monitoring personnel would be exposed to an immediate danger as a consequence of complying with the monitoring requirements identified in paragraphs (f)(1)(i) through (iii) of this section, or the inspection requirements identified in paragraph (f)(1)(iv) of this section.

(ii) The owner or operator of equipment that is designated as unsafe-to-monitor must have a written plan that requires monitoring of the equipment as frequently as practicable during safe-to-monitor times. For valves, connectors, and agitators, monitoring shall not be more frequent than the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located. For closed-vent systems, inspections shall not be more frequent than annually.

(3) *Equipment that is difficult-to-monitor.* (i) A valve, agitator, pump, or any part of a closed-vent system may be designated as difficult-to-monitor if the owner or operator determines that the equipment cannot be monitored or inspected without elevating the monitoring personnel more than 2 meters above a support surface or the equipment is not accessible in a safe manner when it is in organic HAP service;

(ii) At a new affected source, an owner or operator may designate no

more than 3 percent of valves as difficult-to-monitor.

(iii) The owner or operator of valves, agitators, or pumps designated as difficult-to-monitor must have a written plan that requires monitoring of the equipment at least once per calendar year or on the periodic monitoring schedule otherwise applicable to the group of processes in which the equipment is located, whichever is less frequent. For any part of a closed-vent system designated as difficult-to-monitor, the owner or operator must have a written plan that requires inspection of the closed-vent system at least once every 5 years.

(4) *Inaccessible, ceramic, or ceramic-lined connectors.* (i) A connector may be designated as inaccessible if it is:

(A) Buried;

(B) Insulated in a manner that prevents access to the equipment by a monitor probe;

(C) Obstructed by equipment or piping that prevents access to the equipment by a monitor probe;

(D) Unable to be reached from a wheeled scissor-lift or hydraulic-type scaffold which would allow access to equipment up to 7.6 meters above the ground; or

(E) Not able to be accessed at any time in a safe manner to perform monitoring. Unsafe access includes, but is not limited to, the use of a wheeled scissor-lift on unstable or uneven terrain, the use of a motorized man-lift basket in areas where an ignition potential exists, or access would require near proximity to hazards such as electrical lines, or would risk damage to equipment.

(F) Would require elevating the monitoring personnel more than 2 meters above a permanent support surface or would require the erection of scaffold.

(ii) At a new affected source, an owner or operator may designate no more than 3 percent of connectors as inaccessible.

(iii) If any inaccessible, ceramic, or ceramic-lined connector is observed by visual, audible, olfactory, or other means to be leaking, the leak shall be repaired as soon as practicable, but no later than 15 calendar days after the leak is detected, except as provided in paragraph (b)(3)(i) of this section.

(iv) Any connector that is inaccessible or that is ceramic or ceramic-lined is exempt from the recordkeeping and reporting requirements of paragraphs (g) and (h) of this section.

(g) *Recordkeeping requirements.* (1) An owner or operator of more than one group of processes subject to the provisions of this section may comply with the recordkeeping requirements for the groups of processes in one recordkeeping system if the system identifies with each record the program being implemented (e.g., quarterly monitoring) for each type of equipment. All records and information required by this section shall be maintained in a manner that can be readily accessed at the plant site. This could include physically locating the records at the plant site or accessing the records from a central location by computer at the plant site.

(2) *General recordkeeping.* Except as provided in paragraph (g)(5) of this section, the following information pertaining to all equipment subject to the requirements in this section shall be recorded:

(i)(A) A list of identification numbers for equipment (except instrumentation systems) subject to the requirements of this section. Connectors, except those subject to paragraph (f) of this section, need not be individually identified if all connectors in a designated area or length of pipe subject to the provisions of this section are identified as a group, and the number of subject connectors is indicated. The list for each type of equipment shall be completed no later than the completion of the initial survey required for that component. The list of identification numbers shall be updated, if needed, to incorporate equipment changes within 15 calendar days of the completion of each monitoring survey for the type of equipment component monitored.

(B) A schedule for monitoring connectors subject to the provisions of § 63.174(a) of subpart H of this part and valves subject to the provisions of paragraph (e)(4) of this section.

(C) Physical tagging of the equipment is not required to indicate that it is in organic HAP service. Equipment subject to the provisions of this section may be identified on a plant site plan,

in log entries, or by other appropriate methods.

(ii)(A) A list of identification numbers for equipment that the owner or operator elects to equip with a closed-vent system and control device, subject to the provisions of paragraphs (b)(4)(iv) or (c)(7) of this section or § 63.164(h).

(B) A list of identification numbers for compressors that the owner or operator elects to designate as operating with an instrument reading of less than 500 parts per million above background, under the provisions of § 63.164(i) of subpart H of this part.

(iii)(A) A list of identification numbers for pressure relief devices subject to the provisions in paragraph (b)(4)(i) of this section.

(B) A list of identification numbers for pressure relief devices equipped with rupture disks, subject to the provisions of paragraph (b)(4)(ii)(B) of this section.

(iv) Identification of instrumentation systems subject to the provisions of this section. Individual components in an instrumentation system need not be identified.

(v) The following information shall be recorded for each dual mechanical seal system:

(A) Design criteria required by paragraph (c)(5)(vi)(A) of this section and § 63.164(e)(2) of subpart H of this part, and an explanation of the design criteria; and

(B) Any changes to these criteria and the reasons for the changes.

(vi) A list of equipment designated as unsafe-to-monitor or difficult-to-monitor under paragraph (f) of this section and a copy of the plan for monitoring this equipment.

(vii) A list of connectors removed from and added to the process, as described in § 63.174(i)(1) of subpart H of this part, and documentation of the integrity of the weld for any removed connectors, as required in § 63.174(j) of subpart H of this part. This is not required unless the net credits for removed connectors is expected to be used.

(viii) For batch processes that the owner or operator elects to monitor as provided under § 63.178(c) of subpart H of this part, a list of equipment added

to batch product processes since the last monitoring period required in § 63.178(c)(3)(ii) and (iii) of subpart H of this part. This list must be completed for each type of equipment within 15 calendar days of the completion of the each monitoring survey for the type of equipment monitored.

(3) *Records of visual inspections.* For visual inspections of equipment subject to the provisions of paragraphs (c)(2)(iii) and (c)(5)(iv) of this section, the owner or operator shall document that the inspection was conducted and the date of the inspection. The owner or operator shall maintain records as specified in paragraph (g)(4) of this section for leaking equipment identified in this inspection, except as provided in paragraph (g)(5) of this section. These records shall be retained for 5 years.

(4) *Monitoring records.* When each leak is detected as specified in paragraphs (c) and (e) of this section and §§ 63.164, 63.169, 63.172, and 63.174 of subpart H of this part, the owner or operator shall record the information specified in paragraphs (g)(4)(i) through (ix) of this section. All records shall be retained for 5 years, in accordance with the requirements of § 63.10(b)(1) of subpart A of this part.

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

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

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

(iv) If postrepair monitoring is required, maximum instrument reading measured by Method 21 of 40 CFR part 60, appendix A, after it is successfully repaired or determined to be nonrepairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(A) The owner or operator may develop a written procedure that identifies the conditions that justify a delay of repair. The written procedures must be maintained at the plant site. Reasons for delay of repair may be docu-

mented by citing the relevant sections of the written procedure.

(B) If delay of repair was caused by depletion of stocked parts, there must be documentation that the spare parts were sufficiently stocked onsite before depletion and the reason for depletion.

(vi) If repairs were delayed, dates of process shutdowns that occur while the equipment is unrepaired.

(vii)(A) If the alternative in § 63.174(c)(1)(ii) of subpart H of this part is not in use for the monitoring period, identification, either by list, location (area or grouping), or tagging of connectors disturbed since the last monitoring period required in § 63.174(b) of subpart H of this part, as described in § 63.174(c)(1) of subpart H of this part.

(B) The date and results of follow-up monitoring as required in § 63.174(c) of subpart H of this part. If identification of disturbed connectors is made by location, then all connectors within the designated location shall be monitored.

(viii) The date and results of the monitoring required in § 63.178(c)(3)(i) of subpart H of this part for equipment added to a batch process since the last monitoring period required in § 63.178(c)(3)(ii) and (iii) of subpart H of this part. If no leaking equipment is found in this monitoring, the owner or operator shall record that the inspection was performed. Records of the actual monitoring results are not required.

(ix) Copies of the periodic reports as specified in paragraph (h)(3) of this section, if records are not maintained on a computerized data base capable of generating summary reports from the records.

(5) *Records of pressure tests.* The owner or operator who elects to pressure test a process equipment train and supply lines between storage and processing areas to demonstrate compliance with this section is exempt from the requirements of paragraphs (g)(2), (3), (4), and (6) of this section. Instead, the owner or operator shall maintain records of the following information:

(i) The identification of each product, or product code, produced during the calendar year. It is not necessary to identify individual items of equipment in the process equipment train.

(ii) Records demonstrating the proportion of the time during the calendar year the equipment is in use in the process that is subject to the provisions of this subpart. Examples of suitable documentation are records of time in use for individual pieces of equipment or average time in use for the process unit. These records are not required if the owner or operator does not adjust monitoring frequency by the time in use, as provided in § 63.178(c)(3)(iii) of subpart H of this part.

(iii) Physical tagging of the equipment to identify that it is in organic HAP service and subject to the provisions of this section is not required. Equipment in a process subject to the provisions of this section may be identified on a plant site plan, in log entries, or by other appropriate methods.

(iv) The dates of each pressure test required in § 63.178(b) of subpart H of this part, the test pressure, and the pressure drop observed during the test.

(v) Records of any visible, audible, or olfactory evidence of fluid loss.

(vi) When a process equipment train does not pass two consecutive pressure tests, the following information shall be recorded in a log and kept for 2 years:

(A) The date of each pressure test and the date of each leak repair attempt.

(B) Repair methods applied in each attempt to repair the leak.

(C) The reason for the delay of repair.

(D) The expected date for delivery of the replacement equipment and the actual date of delivery of the replacement equipment.

(E) The date of successful repair.

(6) *Records of compressor and pressure relief device compliance tests.* The dates and results of each compliance test required for compressors subject to the provisions in § 63.164(i) and the dates and results of the Method 21 of 40 CFR part 60, appendix A, monitoring following a pressure release for each pressure relief device subject to the provisions in paragraphs (b)(4)(i) and (ii) of this section. The results shall include:

(i) The background level measured during each compliance test.

(ii) The maximum instrument reading measured at each piece of equipment during each compliance test.

(7) *Records for closed-vent systems.* The owner or operator shall maintain records of the information specified in paragraphs (g)(7)(i) through (iii) of this section for closed-vent systems and control devices subject to the provisions of paragraph (b)(3)(ii) of this section. The records specified in paragraph (g)(7)(i) of this section shall be retained for the life of the equipment. The records specified in paragraphs (g)(7)(ii) and (iii) of this section shall be retained for 5 years.

(i) The design specifications and performance demonstrations specified in paragraphs (g)(7)(i)(A) through (D) of this section.

(A) Detailed schematics, design specifications of the control device, and piping and instrumentation diagrams.

(B) The dates and descriptions of any changes in the design specifications.

(C) The flare design (i.e., steam assisted, air assisted, or nonassisted) and the results of the compliance demonstration required by § 63.11(b) of subpart A of this part.

(D) A description of the parameter or parameters monitored, as required in paragraph (b)(3)(ii) of this section, to ensure that control devices are operated and maintained in conformance with their design and an explanation of why that parameter (or parameters) was selected for the monitoring.

(ii) Records of operation of closed-vent systems and control devices.

(A) Dates and durations when the closed-vent systems and control devices required in paragraph (c) of this section and §§ 63.164 through 63.166 of subpart H of this part are not operated as designed as indicated by the monitored parameters, including periods when a flare pilot light system does not have a flame.

(B) Dates and durations during which the monitoring system or monitoring device is inoperative.

(C) Dates and durations of startups and shutdowns of control devices required in paragraph (c) of this section and §§ 63.164 through 63.166 of subpart H of this part.

(iii) Records of inspections of closed-vent systems subject to the provisions of § 63.172 of subpart H of this part.

(A) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (2) of subpart H of this part during which no leaks were detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(B) For each inspection conducted in accordance with the provisions of § 63.172(f)(1) or (f)(2) of subpart H of this part during which leaks were detected, the information specified in paragraph (g)(4) of this section shall be recorded.

(8) *Records for components in heavy liquid service.* Information, data, and analysis used to determine that a piece of equipment or process is in heavy liquid service shall be recorded. Such a determination shall include an analysis or demonstration that the process fluids do not meet the criteria of “in light liquid or gas/vapor service.” Examples of information that could document this include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(9) *Records of exempt components.* Identification, either by list, location (area or group), or other method of equipment in organic HAP service less than 300 hr/yr subject to the provisions of this section.

(10) *Records of alternative means of compliance determination.* Owners and operators choosing to comply with the requirements of § 63.179 of subpart H of this part shall maintain the following records:

(i) Identification of the process(es) and the organic HAP they handle.

(ii) A schematic of the process, enclosure, and closed-vent system.

(iii) A description of the system used to create a negative pressure in the enclosure to ensure that all emissions are routed to the control device.

(11) *Records of pressure releases to the atmosphere from pressure relief devices.* For pressure relief devices in organic HAP service subject to paragraph (b)(4)(iii) of this section, keep records of each pressure release to the atmos-

phere, including the following information:

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

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

(iii) The quantity of total HAP emitted during the pressure release and the calculations used for determining this quantity.

(iv) The actions taken to prevent this pressure release.

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

(h) *Reporting Requirements.* (1) Each owner or operator of a source subject to this section shall submit the reports listed in paragraphs (h)(1)(i) and (ii) of this section.

(i) A Notification of Compliance Status report described in paragraph (h)(2) of this section, and

(ii) Periodic reports described in paragraph (h)(3) of this section.

(2) *Notification of compliance status report.* Each owner or operator of a source subject to this section shall submit the information specified in paragraphs (h)(2)(i) through (iii) of this section in the Notification of Compliance Status report described in § 63.1368(f). For pressure relief devices subject to the requirements of paragraph (b)(4)(iii) of this section, the owner or operator shall submit the information listed in paragraph (h)(2)(iv) of this section in the Notification of Compliance Status within 150 days after the first applicable compliance date for pressure relief device monitoring. Section 63.9(j) of subpart A of this part shall not apply to the Notification of Compliance Status report.

(i) The notification shall provide the information listed in paragraphs (h)(2)(i)(A) through (C) of this section for each group of processes subject to the requirements of paragraphs (b) through (g) of this section.

(A) Identification of the group of processes.

(B) Approximate number of each equipment type (e.g., valves, pumps) in organic HAP service, excluding equipment in vacuum service.

(C) Method of compliance with the standard (for example, “monthly leak detection and repair” or “equipped with dual mechanical seals”).

(ii) The notification shall provide the information listed in paragraphs (h)(2)(ii)(A) and (B) of this section for each process subject to the requirements of paragraph (b)(3)(iv) of this section and §63.178(b) of subpart H of this part.

(A) Products or product codes subject to the provisions of this section, and

(B) Planned schedule for pressure testing when equipment is configured for production of products subject to the provisions of this section.

(iii) The notification shall provide the information listed in paragraphs (h)(2)(iii)(A) and (B) of this section for each process subject to the requirements in §63.179 of subpart H of this part.

(A) Process identification.

(B) A description of the system used to create a negative pressure in the enclosure and the control device used to comply with the requirements of paragraph (b)(3)(ii) of this section.

(iv) For pressure relief devices in organic HAP service, a description of the device or monitoring system to be implemented, including the pressure relief devices and process parameters to be monitored (if applicable), a description of the alarms or other methods by which operators will be notified of a pressure release, and a description of how the owner or operator will determine the information to be recorded under paragraphs (g)(11)(ii) and (iii) of this section (i.e., the duration of the pressure release and the methodology and calculations for determining of the quantity of total HAP emitted during the pressure release).

(3) *Periodic reports.* The owner or operator of a source subject to this section shall submit Periodic reports.

(i) A report containing the information in paragraphs (h)(3)(ii) through (v) of this section shall be submitted semi-annually. The first Periodic report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period.

(ii) For equipment complying with the provisions of paragraphs (b) through (g) of this section, the Periodic report shall contain the summary information listed in paragraphs (h)(3)(ii)(A) through (L) of this section for each monitoring period during the 6-month period.

(A) The number of valves for which leaks were detected as described in paragraph (e)(2) of this section, the percent leakers, and the total number of valves monitored;

(B) The number of valves for which leaks were not repaired as required in paragraph (e)(7) of this section, identifying the number of those that are determined nonrepairable;

(C) The number of pumps and agitators for which leaks were detected as described in paragraph (c)(2) of this section, the percent leakers, and the total number of pumps and agitators monitored;

(D) The number of pumps and agitators for which leaks were not repaired as required in paragraph (c)(3) of this section;

(E) The number of compressors for which leaks were detected as described in §63.164(f) of subpart H of this part;

(F) The number of compressors for which leaks were not repaired as required in §63.164(g) of subpart H of this part;

(G) The number of connectors for which leaks were detected as described in §63.174(a) of subpart H of this part, the percent of connectors leaking, and the total number of connectors monitored;

(H) The number of connectors for which leaks were not repaired as required in §63.174(d) of subpart H of this part, identifying the number of those that are determined nonrepairable;

(I) The facts that explain any delay of repairs and, where appropriate, why a process shutdown was technically infeasible.

(J) The results of all monitoring to show compliance with §§63.164(i) and 63.172(f) conducted within the semi-annual reporting period.

(K) If applicable, the initiation of a monthly monitoring program under either paragraph (c)(4)(ii) or paragraph (e)(4)(i)(A) of this section.

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(L) If applicable, notification of a change in connector monitoring alternatives as described in § 63.174(c)(1) of subpart H of this part.

(iii) For owners or operators electing to meet the requirements of § 63.178(b) of subpart H of this part, the Periodic report shall include the information listed in paragraphs (h)(3)(iii) (A) through (E) of this section for each process.

(A) Product process equipment train identification;

(B) The number of pressure tests conducted;

(C) The number of pressure tests where the equipment train failed either the retest or two consecutive pressure tests;

(D) The facts that explain any delay of repairs; and

(E) The results of all monitoring to determine compliance with § 63.172(f) of subpart H of this part.

(iv) Any change in the information submitted under paragraph (h)(2) of this section shall be provided in the next Periodic report.

(v) For pressure relief devices in organic HAP service, Periodic Reports must include the information specified in paragraphs (h)(3)(v)(A) through (C) of this section.

(A) For pressure relief devices in organic HAP service subject to paragraph (b)(4) of this section, report confirmation that all monitoring to show compliance was conducted within the reporting period.

(B) For pressure relief devices in organic HAP gas or vapor service subject to paragraph (b)(4)(ii) of this section, report any instrument reading of 500 ppm above background or greater, more than 5 calendar days after the pressure release.

(C) For pressure relief devices in organic HAP service subject to paragraph (b)(4)(iii) of this section, report each pressure release to the atmosphere, including the following information:

(1) The source, nature, and cause of the pressure release.

(2) The date, time, and duration of the pressure release.

(3) The quantity of total HAP emitted during the pressure release and the method used for determining this quantity.

(4) The actions taken to prevent this pressure release.

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

[64 FR 33589, June 23, 1999, as amended at 67 FR 59345, Sept. 20, 2002; 79 FR 17372, Mar. 27, 2014]

§ 63.1364 Compliance dates.

(a) *Compliance dates for existing sources.* (1) An owner or operator of an existing affected source must comply with the provisions in this subpart (except § 63.1363(b)(4)(iii)) by December 23, 2003. Compliance with the pressure relief device monitoring provisions of § 63.1363(b)(4)(iii) shall occur no later than March 27, 2017.

(2) Pursuant to section 112(i)(3)(B) of the CAA, an owner or operator of an existing source may request an extension of up to 1 additional year to comply with the provisions of this subpart if the additional time is needed for the installation of controls.

(i) For purposes of this subpart, a request for an extension shall be submitted no later than 120 days prior to the compliance date specified in paragraph (a)(1) of this section, except as provided in paragraph (a)(2)(ii) of this section. The dates specified in § 63.6(i) of subpart A of this part for submittal of requests for extensions shall not apply to sources subject to this subpart.

(ii) An owner or operator may submit a compliance extension request after the date specified in paragraph (a)(1)(i) of this section provided the need for the compliance extension arose after that date and before the otherwise applicable compliance date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include the data described in § 63.6(i)(8)(A), (B), and (D) of subpart A of this part.

(b) *Compliance dates for new and reconstructed sources.* An owner or operator of a new or reconstructed affected source must comply with the provisions of this subpart (except § 63.1363(b)(4)(iii)) on June 23, 1999 or upon startup, whichever is later. New or reconstructed affected sources that commenced construction after November 10, 1997, but on or before January 9, 2012, must be in compliance with the

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pressure relief device monitoring provisions of § 63.1363(b)(4)(iii) no later than March 27, 2017. New or reconstructed sources that commenced construction after January 9, 2012, must be in compliance with the pressure relief device monitoring provisions of § 63.1363(b)(4)(iii) upon initial startup or by March 27, 2014, whichever is later.

[64 FR 33589, June 23, 1999, as amended at 67 FR 13511, Mar. 22, 2002; 67 FR 38203, June 3, 2002; 79 FR 17374, Mar. 27, 2014]

§ 63.1365 Test methods and initial compliance procedures.

(a) *General.* Except as specified in paragraph (a)(4) of this section, the procedures specified in paragraphs (c), (d), (e), (f), and (g) of this section are required to demonstrate initial compliance with § 63.1362(b), (c), (d), (f), and (g), respectively. The provisions in paragraph (a)(1) of this section apply to design evaluations that are used to demonstrate compliance with the standards for process vents and storage vessels. The provisions in paragraph (a)(2) of this section apply to performance tests that are specified in paragraphs (c), (d), and (e) of this section. The provisions in paragraph (a)(3) of this section describe initial compliance procedures for flares. The provisions in paragraph (a)(5) of this section are used to demonstrate initial compliance with the alternative standards specified in § 63.1362(b)(6) and (c)(4). The provisions in paragraph (a)(6) of this section are used to comply with the outlet concentration requirements specified in § 63.1362(b)(2)(iv)(A), (b)(3)(ii), (b)(4)(ii)(A), (b)(5)(ii), and (b)(5)(iii).

(1) *Design evaluation.* To demonstrate that a control device meets the required control efficiency, a design evaluation must address the composition and HAP concentration of the vent stream entering the control device. A design evaluation also must address other vent stream characteristics and control device operating parameters as specified in any one of paragraphs (a)(1)(i) through (vii) of this section, depending on the type of control device that is used. If the vent stream is not the only inlet to the control device, the efficiency demonstration also must consider all other vapors, gases, and

liquids, other than fuels, received by the control device.

(i) For an enclosed combustion device used to comply with the provisions of § 63.1362(b)(2)(iv), (b)(4)(ii), (c)(2)(iv)(B), or (c)(3) with a minimum residence time of 0.5 seconds and a minimum temperature of 760 °C, the design evaluation must document that these conditions exist.

(ii) For a combustion control device that does not satisfy the criteria in paragraph (a)(1)(i) of this section, the design evaluation must document control efficiency and address the following characteristics, depending on the type of control device:

(A) For a thermal vapor incinerator, the design evaluation must consider the autoignition temperature of the organic HAP, must consider the vent stream flow rate, and must establish the design minimum and average temperature in the combustion zone and the combustion zone residence time.

(B) For a catalytic vapor incinerator, the design evaluation must consider the vent stream flow rate and must establish the design minimum and average temperatures across the catalyst bed inlet and outlet.

(C) For a boiler or process heater, the design evaluation must consider the vent stream flow rate, must establish the design minimum and average flame zone temperatures and combustion zone residence time, and must describe the method and location where the vent stream is introduced into the flame zone.

(iii) For a condenser, the design evaluation must consider the vent stream flow rate, relative humidity, and temperature, and must establish the maximum temperature of the condenser exhaust vent stream and the corresponding outlet organic HAP compound concentration level or emission rate for which the required reduction is achieved.

(iv) For a carbon adsorption system that regenerates the carbon bed directly onsite in the control device such as a fixed-bed adsorber, the design evaluation must consider the vent stream flow rate, relative humidity, and temperature, and must establish the design exhaust vent stream organic

compound concentration level, adsorption cycle time, number of carbon beds and their capacities, type and working capacity of activated carbon used for the carbon beds, design total regeneration stream mass or volumetric flow over the period of each complete carbon bed regeneration cycle, design carbon bed temperature after regeneration, design carbon bed regeneration time, and design service life of carbon. For vacuum desorption, the pressure drop must be included.

(v) For a carbon adsorption system that does not regenerate the carbon bed directly onsite in the control device such as a carbon canister, the design evaluation must consider the vent stream mass or volumetric flow rate, relative humidity, and temperature, and must establish the design exhaust vent stream organic compound concentration level, capacity of the carbon bed, type and working capacity of activated carbon used for the carbon bed, and design carbon replacement interval based on the total carbon working capacity of the control device and source operating schedule.

(vi) For a scrubber, the design evaluation must consider the vent stream composition, constituent concentrations, liquid-to-vapor ratio, scrubbing liquid flow rate and concentration, temperature, and the reaction kinetics of the constituents with the scrubbing liquid. The design evaluation must establish the design exhaust vent stream organic compound concentration level and must include the additional information in paragraphs (a)(1)(vi)(A) and (B) of this section for trays and a packed column scrubber.

(A) Type and total number of theoretical and actual trays;

(B) Type and total surface area of packing for entire column, and for individual packed sections if column contains more than one packed section.

(vii) For fabric filters, the design evaluation must include the pressure drop through the device and the net gas-to-cloth ratio (i.e., cubic feet of gas per square feet of cloth).

(2) *Calculation of TOC or total organic HAP concentration.* The TOC concentration or total organic HAP concentration is the sum of the concentrations of the individual components. If compli-

ance is being determined based on TOC, the owner or operator shall compute TOC for each run using Equation 6 of this subpart. If compliance is being determined based on total organic HAP, the owner or operator shall compute total organic HAP using Equation 6 of this subpart, except that only organic HAP compounds shall be summed; when determining compliance with the wastewater provisions of § 63.1362(d), the organic HAP compounds shall consist of the organic HAP compounds in Table 9 of subpart G of this part.

$$CG_T = \frac{1}{m} \sum_{j=1}^m \left(\sum_{i=1}^n CGS_{i,j} \right) \quad (\text{Eq. 6})$$

Where:

CG_T = total concentration of TOC or organic HAP in vented gas stream, average of samples, dry basis, ppmv

$CGS_{i,j}$ = concentration of sample components in vented gas stream for sample j , dry basis, ppmv

n = number of compounds in the sample

m = number of samples in the sample run.

(3) *Initial compliance using flares.* When a flare is used to comply with the standards, the owner or operator shall comply with the provisions in § 63.11(b) of subpart A of this part.

(i) The initial compliance determination shall consist of a visible emissions determination using Method 22 of 40 CFR part 60, appendix A, as described in § 63.11(b)(4) of subpart A of this part, and a determination of net heating value of gas being combusted and exit velocity to comply with the requirements of § 63.11(b)(6) through (8) of subpart A of this part. The net heating value and exit velocity shall be based on the results of performance testing under the conditions described in paragraphs (b)(10) and (11) of this section.

(ii) An owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration when a flare is used.

(4) *Exemptions from compliance demonstrations.* An owner or operator using any control device specified in paragraphs (a)(4)(i) through (ii) of this section is exempt from the initial compliance provisions in paragraphs (c), (d), and (e) of this section.

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(i) A boiler or process heater with a design heat input capacity of 44 megawatts or greater.

(ii) A boiler or process heater into which the emission stream is introduced with the primary fuel.

(5) *Initial compliance with alternative standard.* Initial compliance with the alternative standards in § 63.1362(b)(6) and (c)(4) for combustion devices is demonstrated when the outlet TOC concentration is 20 ppmv or less, and the outlet HCl and chlorine concentration is 20 ppmv or less. Initial compliance with the alternative standards in § 63.1362(b)(6) and (c)(4) for noncombustion devices is demonstrated when the outlet TOC concentration is 50 ppmv or less, and the outlet HCl and chlorine concentration is 50 ppmv or less. To demonstrate initial compliance, the owner or operator shall be in compliance with the monitoring provisions in § 63.1366(b)(5) on the initial compliance date. The owner or operator shall use Method 18 to determine the predominant organic HAP in the emission stream if the TOC monitor is calibrated on the predominant HAP.

(6) *Initial compliance with the 20 ppmv outlet limit.* Initial compliance with the 20 ppmv TOC or total organic HAP concentration is demonstrated when the outlet TOC or total organic HAP concentration is 20 ppmv or less. Initial compliance with the 20 ppmv HCl and chlorine concentration is demonstrated when the outlet HCl and chlorine concentration is 20 ppmv or less. To demonstrate initial compliance, the operator shall use applicable test methods described in paragraphs (b)(1) through (9) of this section, and test under conditions described in paragraph (b)(10) or (11) of this section, as applicable. The owner or operator shall comply with the monitoring provisions in § 63.1366(b)(1) through (5) on the initial compliance date.

(7) *Outlet concentration correction for supplemental gases.* If supplemental gases are added to a vent stream for which compliance with an outlet concentration standard in § 63.1362 or 63.1363 will be demonstrated, the owner or operator must correct the outlet concentration as specified in paragraphs (a)(7)(i) and (ii) of this section.

(i) *Combustion device.* Except as specified in § 63.1366(b)(5)(ii)(A), if the vent stream is controlled with a combustion device, the owner or operator must comply with the provisions in paragraphs (a)(7)(i)(A) through (C) of this section.

(A) To comply with a TOC or total organic HAP outlet concentration standard in § 63.1362(b)(2)(iv)(A), (b)(4)(ii)(A), (b)(6), (c)(2)(iv)(B), (c)(4), (d)(13), or § 63.172, the actual TOC outlet concentration must be corrected to 3 percent oxygen.

(B) If the inlet stream to the combustion device contains any HCl, chlorine, or halogenated compounds, and the owner or operator elects to comply with a total HCl and chlorine outlet concentration standard in § 63.1362(b)(3)(ii), (b)(5)(ii), (b)(5)(iii), (b)(6), or (c)(4), the actual total HCl and chlorine outlet concentration must be corrected to 3 percent oxygen.

(C) The integrated sampling and analysis procedures of Method 3B of 40 CFR part 60, appendix A, shall be used to determine the actual oxygen concentration (%O_{2d}). The samples shall be taken during the same time that the TOC, total organic HAP, and total HCl and chlorine samples are taken. The concentration corrected to 3 percent oxygen (C_d) shall be computed using Equation 7 of this subpart:

$$C_c = C_m \left(\frac{17.9}{20.9 - \%O_{2d}} \right) \quad (\text{Eq. 7})$$

Where:

C_c = concentration of TOC, total organic HAP, or total HCl and chlorine corrected to 3 percent oxygen, dry basis, ppmv

C_m = total concentration of TOC, total organic HAP, or total HCl and chlorine in the vented gas stream, average of samples, dry basis, ppmv

%O_{2d} = concentration of oxygen measured in vented gas stream, dry basis, percent by volume.

(ii) *Noncombustion devices.* If a control device other than a combustion device, and not in series with a combustion device, is used to comply with a TOC, total organic HAP, or total HCl and chlorine outlet concentration standard, the owner or operator must correct the actual concentration for supplemental gases using Equation 8 of this subpart.

$$C_a = C_m \left(\frac{V_s + V_a}{V_a} \right) \quad (\text{Eq. 8})$$

Where:

C_a = corrected outlet TOC, total organic HAP, or total HCl and chlorine concentration, dry basis, ppmv

C_m = actual TOC, total organic HAP, or total HCl and chlorine concentration measured at control device outlet, dry basis, ppmv

V_a = total volumetric flow rate of affected streams vented to the control device

V_s = total volumetric flow rate of supplemental gases.

(b) *Test methods and conditions.* When testing is conducted to measure emissions from an affected source, the test methods specified in paragraphs (b)(1) through (9) of this section shall be used. Compliance and performance tests shall be performed under such conditions as the Administrator specifies to the owner or operator based on representative performance of the affected source for the period being tested and as specified in paragraphs (b)(10) and (11) of this section. Representative conditions exclude periods of startup and shutdown unless specified by the Administrator or an applicable subpart. The owner or operator may not conduct performance tests during periods of malfunction. The owner or operator 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, the owner or operator shall make available to the Administrator such records as may be necessary to determine the conditions of performance tests.

(1) Method 1 or 1A of appendix A of 40 CFR part 60 shall be used for sample and velocity traverses.

(2) Method 2, 2A, 2C, or 2D of appendix A of 40 CFR part 60 shall be used for velocity and volumetric flow rates.

(3) Method 3 of appendix A of 40 CFR part 60 shall be used for gas analysis.

(4) Method 4 of appendix A of 40 CFR part 60 shall be used for stack gas moisture.

(5) Concentration measurements shall be adjusted to negate the dilution effects of introducing nonaffected gaseous streams into the vent streams

prior to control or measurement. The following methods are specified for concentration measurements of organic compounds:

(i) Method 18 of appendix A of 40 CFR part 60 may be used to determine HAP concentration in any control device efficiency determination.

(ii) Method 25 of appendix A of 40 CFR part 60 may be used to determine total gaseous nonmethane organic concentration for control efficiency determinations in combustion devices.

(iii) Method 25A of appendix A of 40 CFR part 60 may be used to determine the HAP or TOC concentration for control device efficiency determinations under the conditions specified in Method 25 of appendix A of 40 CFR part 60 for direct measurement of an effluent with a flame ionization detector, or in demonstrating compliance with the 20 ppmv TOC outlet standard. If Method 25A of appendix A of 40 CFR part 60 is used to determine the concentration of TOC for the 20 ppmv standard, the instrument shall be calibrated on methane or the predominant HAP. If calibrating on the predominant HAP, the use of Method 25A of appendix A of 40 CFR part 60 shall comply with paragraphs (b)(5)(i)(A) through (C) of this section.

(A) The organic HAP used as the calibration gas for Method 25A, 40 CFR part 60, appendix A, shall be the single organic HAP representing the largest percent by volume.

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

(C) The span value of the analyzer must be less than 100 ppmv.

(6) The methods in either paragraph (b)(6)(i) or (ii) of this section shall be used to determine the concentration, in mg/dscm, of total HCl and chlorine. Concentration measurements shall be adjusted to negate the dilution effects of introducing nonaffected gaseous streams into the vent streams prior to control or measurement.

(i) Method 26 or 26A of 40 CFR part 60, appendix A.

(ii) Any other method if the method or data have been validated according to the applicable procedures of Method 301 of appendix A of this part.

(7) Method 5 of appendix A of 40 CFR part 60 shall be used to determine the concentration of particulate matter in exhaust gas streams from bag dumps and product dryers.

(8) Wastewater analysis shall be conducted in accordance with § 63.144(b)(5)(i) through (iii) or as specified in paragraph (b)(8)(i) or (ii) of this section.

(i) As an alternative to the methods specified in § 63.144(b)(5)(i), an owner or operator may conduct wastewater analyses using Method 1666 or 1671 of 40 CFR part 136, appendix A, 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 an owner or operator uses Method 1666 or 1671 of 40 CFR part 136, appendix A.

(ii) As an alternative to the methods specified in § 63.144(b)(5)(i), an owner or operator may use procedures specified in Method 8260 or 8270 in “Test Methods for Evaluating Solid Waste, Physical/Chemical Methods,” EPA Publication No. SW-846, Third Edition, September 1986, as amended by Update I, November 15, 1992. An owner or operator also may use any more recent, updated version of Method 8260 or 8270 approved by EPA. For the purpose of using Method 8260 or 8270 to comply with this subpart, the owner or operator must maintain a formal quality assurance program consistent with either Section 8 of Method 8260 or Method 8270. This program must include the elements related to measuring the concentrations of volatile compounds that are specified in paragraphs (b)(8)(ii)(A) through (C) of this section.

(A) Documentation of site-specific procedures to minimize the loss of compounds due to volatilization, biodegradation, reaction, or sorption during the sample collection, storage, and preparation steps.

(B) Documentation of specific quality assurance procedures followed during sampling, sample preparation, sample introduction, and analysis.

(C) Measurement of the average accuracy and precision of the specific pro-

cedures, including field duplicates and field spiking of the material source before or during sampling with compounds having similar chemical characteristics to the target analytes.

(9) Method 22 of appendix A of 40 CFR part 60 shall be used to determine visible emissions from flares.

(10) *Testing conditions for continuous processes.* Testing of process vents on equipment operating as part of a continuous process shall consist of three one-hour runs. Gas stream volumetric flow rates shall be measured every 15 minutes during each 1-hour run. Organic HAP concentration shall be determined from samples collected in an integrated sample over the duration of each one-hour test run, or from grab samples collected simultaneously with the flow rate measurements (every 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. For continuous gas streams, the emission rate used to determine compliance shall be the average emission rate of the three test runs.

(11) *Testing conditions for batch processes.* Testing of emissions on equipment where the flow of gaseous emissions is intermittent (batch operations) shall be conducted at absolute peak-case conditions or hypothetical peak-case conditions, as specified in paragraphs (b)(11)(i) and (ii) of this section, respectively. Gas stream volumetric flow rates shall be measured at 15-minute intervals. Organic HAP, TOC, or HCl and chlorine concentration shall be determined from samples collected in an integrated sample over the duration of the test, or from grab samples collected simultaneously with the flow rate measurements (every 15 minutes). If an integrated sample is collected for laboratory analysis, the sampling rate shall be adjusted proportionally to reflect variations in flow rate. In all cases, a site-specific test plan shall be submitted to the Administrator for approval prior to testing in accordance with § 63.7(c). The test plan shall include the emissions profile described in paragraph (b)(11)(iii) of this section. The term “HAP mass loading” as used in paragraphs (b)(11)(i) through (iii) of this section refers to the class of HAP,

either organic or HCl and chlorine, that the control device is intended to control.

(i) *Absolute peak-case.* If the most challenging conditions for the control device occur under maximum HAP load, the absolute peak-case conditions shall be characterized by the criteria presented in paragraph (b)(11)(i)(A) or (B) of this section. Otherwise, absolute peak-case conditions are defined by the conditions in paragraph (b)(11)(i)(C) of this section.

(A) The period in which the inlet to the control device will contain at least 50 percent of the maximum HAP mass load that may be vented to the control device over any 8-hour period. An emission profile as described in paragraph (b)(11)(iii)(A) of this section shall be used to identify the 8-hour period that includes the maximum projected HAP load.

(B) A 1-hour period of time in which the inlet to the control device will contain the highest hourly HAP mass loading rate that may be vented to the control device. An emission profile as described in paragraph (b)(11)(iii)(A) of this section shall be used to identify the 1-hour period of maximum HAP loading.

(C) The period of time when a condition other than the maximum HAP load is most challenging for the control device. These conditions include, but are not limited to the following:

(1) Periods when the streams contain the highest combined VOC and HAP hourly load, as described by the emission profiles in paragraph (b)(11)(iii) of this section; or

(2) Periods when the streams contain HAP constituents that approach the limits of solubility for scrubbing media; or

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

(ii) *Hypothetical peak-case.* Hypothetical peak-case conditions are simulated test conditions that, at a minimum, contain the highest total average hourly HAP load of emissions that would be predicted to be vented to the control device from the emissions profile described in either paragraph (b)(11)(iii)(B) or (C) of this section.

(iii) *Emissions profile.* The owner or operator may choose to perform tests only during those periods of the peak-case episode(s) that the owner or operator selects to control as part of achieving the required emission reduction. Except as specified in paragraph (b)(11)(iii)(D) of this section, the owner or operator shall develop an emission profile for the vent to the control device that describes the characteristics of the vent stream at the inlet to the control device under either absolute or hypothetical peak-case conditions. The emissions profile shall be developed based on the applicable procedures described in paragraphs (b)(11)(iii)(A) through (C) of this section, as required by paragraphs (b)(11)(i) and (ii) of this section.

(A) *Emissions profile by process.* The emissions profile must consider all emission episodes that could contribute to the vent stack for a period of time that is sufficient to include all processes venting to the stack and shall consider production scheduling. The profile shall describe the HAP load to the device that equals the highest sum of emissions from the episodes that can vent to the control device during the period of absolute peak-case conditions specified in paragraph (b)(11)(i)(A), (B), or (C) as appropriate. Emissions per episode shall be calculated using the procedures specified in paragraph (c)(2) of this section. When complying with paragraph (b)(11)(i)(B) of this section, emissions per episode shall be divided by the duration of the episode if the duration of the episode is longer than 1 hour.

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

(C) *Emission profile by capture and control device limitation.* The emission profile shall consider the capture and control system limitations and the highest hourly emissions that can be routed to the control device, based on maximum flow rate and concentrations possible because of limitations on conveyance and control equipment (e.g., fans, LEL alarms and safety bypasses).

(D) *Exemptions.* The owner or operator is not required to develop an emission profile under the circumstances described in paragraph (b)(11)(iii)(D)(1) or (2) of this section.

(1) If all process vents for a process are controlled using a control device or series of control devices that reduce HAP emissions by 98 percent or more, no other emission streams are vented to the control device when it is used to control emissions from the subject process, and the performance test is conducted over the entire batch cycle.

(2) If a control device is used to comply with the outlet concentration limit for process vent emission streams from a single process (but not necessarily all of the process vents from that process), no other emission streams are vented to the control device while it is used to control emissions from the subject process, and the performance test is conducted over the entire batch cycle.

(iv) *Test duration.* Three runs, at a minimum of 1 hour each, are required for performance testing. When complying with a percent reduction standard, each test run may be a maximum of either 24 hours or the duration of the longest batch controlled by the control device, whichever is shorter, and each run must include the same absolute or hypothetical peak-case conditions, as defined in paragraph (b)(11)(i) or (ii) of this section. When complying with an outlet concentration limit, each run must include the same absolute or hypothetical peak-case conditions, as defined in paragraph (b)(11)(i) or (ii) of this section, and the duration of each run may not exceed the duration of the applicable peak-case condition.

(c) *Initial compliance with process vent provisions.* The owner or operator of an affected source shall demonstrate compliance with the process vent standards in § 63.1362(b) using the procedures de-

scribed in paragraphs (c)(1) through (3) of this section.

(1) Compliance with the process vent standards in § 63.1362(b) shall be demonstrated in accordance with the provisions specified in paragraphs (c)(1)(i) through (viii) of this section.

(i) Initial compliance with the emission limit cutoffs in § 63.1362(b)(2)(i) and (b)(4)(i) is demonstrated when the uncontrolled organic HAP emissions from the sum of all process vents within a process are less than or equal to 0.15 Mg/yr. Uncontrolled HAP emissions shall be determined using the procedures described in paragraph (c)(2) of this section.

(ii) Initial compliance with the emission limit cutoffs in § 63.1362(b)(3)(i) and (b)(5)(i) is demonstrated when the uncontrolled HCl and Cl₂ emissions from the sum of all process vents within a process are less than or equal to 6.8 Mg/yr. Initial compliance with the emission limit cutoffs in § 63.1362(b)(5)(ii) and (iii) is demonstrated when the uncontrolled HCl and Cl₂ emissions are greater than or equal to 6.8 Mg/yr or greater than or equal to 191 Mg/yr, respectively. Uncontrolled emissions shall be determined using the procedures described in paragraph (c)(2) of this section.

(iii) Initial compliance with the organic HAP percent reduction requirements specified in § 63.1362(b)(2)(ii), (iii), and (b)(4)(ii) is demonstrated by determining controlled HAP emissions using the procedures described in paragraph (c)(3) of this section, determining uncontrolled HAP emissions using the procedures described in paragraph (c)(2) of this section, and calculating the applicable percent reduction. As an alternative, if the conditions specified in paragraph (b)(11)(iii)(D)(1) of this section are met, initial compliance may be demonstrated by showing the control device reduces emissions by 98 percent by weight or greater using the procedures specified in paragraph (c)(3) of this section.

(iv) Initial compliance with the HCl and Cl₂ percent reduction requirements specified in § 63.1362(b)(3)(ii), (b)(5)(ii), and (b)(5)(iii) is demonstrated by determining controlled emissions of HCl and Cl₂ using the procedures described in

paragraph (c)(3) of this section, determining uncontrolled emissions of HCl and Cl₂ using the procedures described in paragraph (c)(2) of this section, and calculating the applicable percent reduction.

(v) Initial compliance with the outlet concentration limits in § 63.1362(b)(2)(iv)(A), (b)(3)(ii), (b)(4)(ii)(A), (b)(5)(ii) and (iii) is demonstrated when the outlet TOC or total organic HAP concentration is 20 ppmv or less and the outlet HCl and chlorine concentration is 20 ppmv or less. The owner or operator shall demonstrate compliance by fulfilling the requirements in paragraph (a)(6) of this section. If an owner or operator elects to develop an emissions profile by process as described in paragraph (b)(11)(iii)(A) of this section, uncontrolled emissions shall be determined using the procedures in paragraph (c)(2) of this section.

(vi) Initial compliance with the alternative standard in § 63.1362(b)(6) is demonstrated by fulfilling the requirements in paragraph (a)(5) of this section.

(vii) Initial compliance when using a flare is demonstrated by fulfilling the requirements in paragraph (a)(3) of this section.

(viii) No initial compliance demonstration is required for control devices specified in § 63.1362(l).

(2) *Uncontrolled emissions.* The owner or operator referred to from paragraphs (c)(1)(i) through (v) of this section shall calculate uncontrolled emissions according to the procedures described in paragraph (c)(2)(i) or (ii) of this section, as appropriate.

(i) *Emission estimation procedures.* The owner or operator shall determine uncontrolled HAP emissions using emission measurements and/or calculations for each batch emission episode according to the engineering evaluation methodology in paragraphs (c)(2)(i)(A) through (H) of this section.

(A) Individual HAP partial pressures in multicomponent systems shall be determined in accordance with the methods specified in paragraphs (c)(2)(i)(A)(1) through (3) of this section. Chemical property data may be obtained from standard references.

(1) If the components are miscible in one another, use Raoult's law to calculate the partial pressures;

(2) If the solution is a dilute aqueous mixture, use Henry's law constants to calculate partial pressures;

(3) If Raoult's law or Henry's law are not appropriate or available, use any of the methods specified in paragraphs (c)(2)(i)(A) (3)(i) through (iii) of this section.

(i) Use experimentally obtained activity coefficients;

(ii) Use models such as the group-contribution models to predict activity coefficients;

(iii) Assume the components of the system behave independently and use the summation of all vapor pressures from the HAP as the total HAP partial pressure;

(B) *Charging or filling.* Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart:

$$E = \frac{(V)}{(R)(T)} \times \sum_{i=1}^n (P_i)(MW_i) \quad (\text{Eq. 9})$$

Where:

E = mass of HAP emitted

P_i = partial pressure of the individual HAP

V = volume of gas displaced from the vessel

R = ideal gas law constant

T = temperature of the vessel vapor space; absolute

MW_i = molecular weight of the individual HAP

(C) *Purging.* Emissions from purging shall be calculated using Equation 10 of this subpart, except that for purge flow rates greater than 100 scfm, the mole fraction of HAP will be assumed to be 25 percent of the saturated value.

$$E = \sum_{i=1}^n P_i MW_i \times \left(\frac{(V)(t)}{(R)(T)} \right) \times \frac{P_T}{P_T - \sum_{j=1}^m (P_j)} \quad (\text{Eq. 10})$$

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Where:

- E = mass of HAP emitted
- V = purge flow rate at the temperature and pressure of the vessel vapor space
- R = ideal gas law constant
- T = temperature of the vessel vapor space; absolute
- P_i = partial pressure of the individual HAP
- P_j = partial pressure of individual condensable compounds (including HAP)
- P_T = pressure of the vessel vapor space
- MW_i = molecular weight of the individual HAP
- t = time of purge
- n = number of HAP compounds in the emission stream
- m = number of condensable compounds (including HAP) in the emission stream.

(D) *Heating.* Emissions caused by heating the contents of a vessel to a

temperature less than the boiling point shall be calculated using the procedures in either paragraph (c)(2)(i)(D)(I), (2), or (4) of this section, as appropriate. If the contents of a vessel are heated to the boiling point, emissions while boiling are assumed to be zero if the owner or operator is complying with the provisions in paragraph (d)(2)(i)(C)(3) of this section.

(I) If the final temperature to which the vessel contents are heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using Equations 11 through 14 of this subpart.

(i) The mass of HAP emitted per episode shall be calculated using Equation 11 of this subpart:

$$E = \frac{\sum_{i=1}^n (P_i)_{T1} + \sum_{i=1}^n (P_i)_{T2}}{Pa_1 + Pa_2} \times \Delta\eta \times MW_{HAP} \quad (\text{Eq. 11})$$

Where:

- E = mass of HAP vapor displaced from the vessel being heated
- (P_i)_{Tn} = partial pressure of each HAP in the vessel headspace at initial (n = 1) and final (n = 2) temperatures
- Pa₁ = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart
- Pa₂ = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart
- ΔH = number of moles of noncondensable gas displaced, as calculated using Equation 12 of this subpart
- MW_{HAP} = The average molecular weight of HAP present in the vessel, as calculated using Equation 14 of this subpart:
- n = number of HAP compounds in the displaced vapor

(ii) The moles of noncondensable gas displaced shall be calculated using Equation 12 of this subpart:

$$\Delta\eta = \frac{V}{R} \left[\left(\frac{Pa_1}{T_1} \right) - \left(\frac{Pa_2}{T_2} \right) \right] \quad (\text{Eq. 12})$$

Where:

- ΔH = number of moles of noncondensable gas displaced

V = volume of free space in the vessel

R = ideal gas law constant

Pa₁ = initial noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

Pa₂ = final noncondensable gas pressure in the vessel, as calculated using Equation 13 of this subpart

T₁ = initial temperature of vessel contents, absolute

T₂ = final temperature of vessel contents, absolute

(iii) The initial and final pressure of the noncondensable gas in the vessel shall be calculated according to Equation 13 of this subpart:

$$Pa_n = Pa_{atm} - \sum_{j=1}^m (P_j)_{Tn} \quad (\text{Eq. 13})$$

Where:

Pa_n = partial pressure of noncondensable gas in the vessel headspace at initial (n = 1) and final (n = 2) temperatures

Pa_{atm} = atmospheric pressure

(P_j)_{Tn} = partial pressure of each condensable volatile organic compound (including HAP) in the vessel headspace at the initial temperature (n = 1) and final (n = 2) temperature

(iv) The average molecular weight of HAP in the displaced gas shall be calculated using Equation 14 of this subpart:

$$MW_{\text{HAP}} = \sum_{i=1}^n \frac{\left((P_i)_{T_1} + (P_i)_{T_2} \right) MW_i}{\sum_{i=1}^n \left((P_i)_{T_1} + (P_i)_{T_2} \right)} \quad (\text{Eq. 14})$$

Where:

MW_{HAP} = average molecular weight of HAP in the displaced gas

$(P_i)_{T_n}$ = partial pressure of each HAP in the vessel headspace at the initial (T_1) and final (T_2) temperatures

MW_i = molecular weight of each HAP

n = number of HAP compounds in the emission stream

(2) If the vessel contents are heated to a temperature greater than 50 K below the boiling point, then emissions from the heating of a vessel shall be calculated as the sum of the emissions calculated in accordance with paragraphs (c)(2)(i)(D)(2)(i) and (ii) of this section.

(i) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 11 of this subpart, where T_2 is the temperature 50 K below the boiling point.

(ii) For the interval from the temperature 50 K below the boiling point to the final temperature, emissions shall be calculated as the summation of emissions for each 5 K increment, where the emission for each increment shall be calculated using Equation 11 of this subpart. If the final temperature of the heatup is lower than 5 K below the boiling point, the final temperature for the last increment shall be the final temperature of the heatup, even if the last increment is less than 5 K. If the

final temperature of the heatup is higher than 5 K below the boiling point, the final temperature for the last increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(3) While boiling, the vessel must be operated with a properly operated process condenser. An initial demonstration that a process condenser is properly operated is required for vessels that operate process condensers without secondary condensers that are air pollution control devices. The owner or operator must either measure the condenser exhaust gas temperature and show it is less than the boiling point of the substance(s) in the vessel, or perform a material balance around the vessel and condenser to show that at least 99 percent of the material vaporized while boiling is condensed. Uncontrolled emissions are assumed to be zero under these conditions. The initial demonstration shall be conducted for all appropriate operating scenarios and documented in the Notification of Compliance Status report as specified in § 63.1368(f).

(4)(i) As an alternative to the procedures described in paragraphs (c)(2)(i)(D)(1) and (2) of this section, emissions caused by heating a vessel to any temperature less than the boiling point may be calculated using Equation 15 of this subpart.

$$E = MW_{\text{HAP}} \times \left(N_{\text{avg}} \times \ln \left(\frac{P_T - \sum_{i=1}^m (P_{i,1})}{P_T - \sum_{i=1}^m (P_{i,2})} \right) - (n_{\text{HAP},2} - n_{\text{HAP},1}) \right) \quad (\text{Eq. 15})$$

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Where:

- E = mass of HAP vapor displaced from the vessel being heated
- N_{avg} = average gas space molar volume during the heating process, as calculated using Equation 16 of this subpart
- P_T = total pressure in the vessel
- P_{i, 1} = partial pressure of the individual HAP compounds at T₁
- P_{i, 2} = partial pressure of the individual HAP compounds at T₂
- MW_{HAP} = average molecular weight of the HAP compounds, as calculated using Equation 14 of this subpart
- n_{HAP, 1} = number of moles of total HAP in the vessel headspace at T₁
- n_{HAP, 2} = number of moles of total HAP in the vessel headspace at T₂
- m = number of HAP compounds in the emission stream.

(ii) The average gas space molar volume during the heating process is calculated using Equation 16 of this subpart.

$$(n_{\text{HAP},2} - n_{\text{HAP},1}) = \frac{V}{(R)(T_2)} \sum_{i=1}^n P_{i,2} - \frac{V}{(R)(T_1)} \sum_{i=1}^n P_{i,1} \quad (\text{Eq. 17})$$

Where:

- n_{HAP, 2} = number of moles of total HAP in the vessel headspace at T₂
- n_{HAP, 1} = number of moles of total HAP in the vessel headspace at T₁
- V = volume of free space in vessel
- R = ideal gas law constant
- T₁ = initial temperature of the vessel contents, absolute
- T₂ = final temperature of the vessel contents, absolute
- P_{i, 1} = partial pressure of the individual HAP compounds at T₁
- P_{i, 2} = partial pressure of the individual HAP compounds at T₂
- n = number of HAP compounds in the emission stream.

(E) *Depressurization.* Emissions from depressurization shall be calculated using the procedures in paragraphs (c)(2)(i)(E)(1) through (5) of this section. Alternatively, the owner or operator may elect to calculate emissions from depressurization using the procedures in paragraph (c)(2)(i)(E)(6) of this section.

(1) The moles of HAP vapor initially in the vessel are calculated using Equation 18 of this subpart:

culated using Equation 16 of this subpart.

$$N_{\text{avg}} = \frac{VP_T}{2R} \left(\frac{1}{T_1} + \frac{1}{T_2} \right) \quad (\text{Eq. 16})$$

Where:

- N_{avg} = average gas space molar volume during the heating process
- V = volume of free space in vessel
- P_T = total pressure in the vessel
- R = ideal gas law constant
- T₁ = initial temperature of the vessel contents, absolute
- T₂ = final temperature of the vessel contents, absolute

(iii) The difference in the number of moles of total HAP in the vessel headspace between the initial and final temperatures is calculated using Equation 17 of this subpart.

$$n_{\text{HAP}} = \frac{V}{R T} \times \sum_{i=1}^n (P_i) \quad (\text{Eq. 18})$$

Where:

- n_{HAP} = moles of HAP vapor in the vessel
- P_i = partial pressure of each HAP in the vessel vapor space
- V = free volume in the vessel being depressurized
- R = ideal gas law constant
- T = absolute temperature in vessel
- n = number of HAP compounds in the emission stream

(2) The initial and final moles of noncondensable gas present in the vessel are calculated using Equations 19 and 20 of this subpart:

$$n_1 = \frac{VP_{\text{nc}_1}}{RT} \quad (\text{Eq. 19})$$

$$n_2 = \frac{VP_{\text{nc}_2}}{RT} \quad (\text{Eq. 20})$$

Where:

- n₁ = initial number of moles of noncondensable gas in the vessel
- n₂ = final number of moles of noncondensable gas in the vessel

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V=free volume in the vessel being depressurized
 P_{nc1}=initial partial pressure of the non-condensable gas, as calculated using Equation 21 of this subpart
 P_{nc2}=final partial pressure of the noncondensable gas, as calculated using Equation 22 of this subpart
 R=ideal gas law constant
 T=temperature, absolute

(3) The initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 21 and 22 of this subpart.

$$P_{nc1} = P_1 - \sum_{j=1}^m (P_j^*) (x_j) \quad (\text{Eq. 21})$$

$$P_{nc2} = P_2 - \sum_{j=1}^m (P_j^*) (x_j) \quad (\text{Eq. 22})$$

$$n_{HAP,e} = \frac{\left(\frac{n_{HAP,1}}{n_1} + \frac{n_{HAP,2}}{n_2} \right)}{2} [n_1 - n_2] \quad (\text{Eq. 23})$$

Where:

n_{HAP, e} = moles of HAP emitted
 n_{HAP, 1} = moles of HAP vapor in vessel at the initial pressure, as calculated using Equation 18 of this subpart
 n_{HAP, 2} = moles of HAP vapor in vessel at the final pressure, as calculated using Equation 18 of this subpart
 n₁ = initial number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart
 n₂ = final number of moles of noncondensable gas in the vessel, as calculated using Equation 19 of this subpart.

(5) Use Equation 24 of this subpart to calculate the mass of HAP emitted:

$$E = \frac{V}{(R)(T)} \times \ln \left(\frac{P_1 - \sum_{j=1}^m (P_j)}{P_2 - \sum_{j=1}^m (P_j)} \right) \times \sum_{i=1}^n (P_i) (MW_i) \quad (\text{Eq. 25})$$

Where:

P_{nc1} = initial partial pressure of the non-condensable gas
 P_{nc2} = final partial pressure of the non-condensable gas
 P₁ = initial vessel pressure
 P₂ = final vessel pressure
 P_j^{*} = vapor pressure of each condensable compound (including HAP) in the emission stream
 x_j = mole fraction of each condensable compound (including HAP) in the liquid phase
 m = number of condensable compounds (including HAP) in the emission stream.

(4) The moles of HAP emitted during the depressurization are calculated by taking an approximation of the average ratio of moles of HAP to moles of noncondensable and multiplying by the total moles of noncondensables released during the depressurization, using Equation 23 of this subpart:

$$E = n_{HAP,e} * MW_{HAP} \quad (\text{Eq. 24})$$

Where:

E=mass of HAP emitted
 n_{HAP, e}=moles of HAP emitted, as calculated using Equation 23 of this subpart
 MW_{HAP}=average molecular weight of the HAP as calculated using Equation 14 of this subpart

(6) As an alternative to the procedures in paragraphs (c)(2)(i)(E)(1) through (5) of this section, emissions from depressurization may be calculated using Equation 25 of this subpart:

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Where:

V=free volume in vessel being depressurized
 R=ideal gas law constant
 T=temperature of the vessel, absolute
 P_i=initial pressure in the vessel
 P₂=final pressure in the vessel
 P_i=partial pressure of the individual HAP compounds
 P_j=partial pressure of individual condensable VOC compounds (including HAP)

MW_i=molecular weight of the individual HAP compounds
 n=number of HAP compounds in the emission stream
 m=number of condensable VOC compounds (including HAP) in the emission stream

(F) *Vacuum systems.* Calculate emissions from vacuum systems using Equation 26 of this subpart:

$$E = \frac{(MW_{HAP})(La)(t)}{MW_{nc}} \left(\frac{\sum_{i=1}^n P_i}{P_T - \sum_{j=1}^m P_j} \right) \quad (\text{Eq. 26})$$

Where:

E = mass of HAP emitted
 P_T = absolute pressure of receiving vessel or ejector outlet conditions, if there is no receiver
 P_i = partial pressure of individual HAP at the receiver temperature or the ejector outlet conditions
 P_j = partial pressure of individual condensable compounds (including HAP) at the receiver temperature or the ejector outlet conditions
 La = total air leak rate in the system, mass/time
 MW_{nc} = molecular weight of noncondensable gas
 t = time of vacuum operation
 MW_{HAP} = average molecular weight of HAP in the emission stream, as calculated using Equation 14 of this subpart, with HAP partial pressures calculated at the temperature of the receiver or ejector outlet, as appropriate
 n = number of HAP components in the emission stream

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

(G) *Gas evolution.* Emissions from gas evolution shall be calculated using Equation 10 of this subpart with V calculated using Equation 27 of this subpart:

$$V = \frac{(W_g)(R)(T)}{(P_T)(MW_g)} \quad (\text{Eq. 27})$$

Where:

V=volumetric flow rate of gas evolution
 W_g=mass flow rate of gas evolution
 R=ideal gas law constant
 T=temperature at the exit, absolute
 P_T=vessel pressure
 MW_g=molecular weight of the evolved gas

(H) *Air drying.* Use Equation 28 of this subpart to calculate emissions from air drying:

$$E = B \times \left(\frac{PS_1}{100 - PS_1} - \frac{PS_2}{100 - PS_2} \right) \quad (\text{Eq. 28})$$

Where:

E=mass of HAP emitted
 B=mass of dry solids
 PS₁=HAP in material entering dryer, weight percent
 PS₂=HAP in material exiting dryer, weight percent.

(ii) *Engineering assessments.* The owner or operator shall conduct an engineering assessment to determine uncontrolled HAP emissions for each emission episode that is not due to vapor displacement, purging, heating, depressurization, vacuum systems, gas evolution, or air drying. For a given

emission episode caused by any of these seven types of activities, the owner or operator also may request approval to determine uncontrolled HAP emissions based on an engineering assessment. Except as specified in paragraph (c)(2)(ii)(A) of this section, all data, assumptions, and procedures used in the engineering assessment shall be documented in the Precompliance plan in accordance with § 63.1367(b). An engineering assessment includes, but is not limited to, the information and procedures described in paragraphs (c)(2)(ii)(A) through (D) of this section.

(A) Test results, provided the tests are representative of current operating practices at the process unit. For process vents without variable emission stream characteristics, an engineering assessment based on the results of a previous test may be submitted in the Notification of Compliance Status report instead of the Precompliance plan. Results from a previous test of process vents with variable emission stream characteristics will be acceptable in place of values estimated using the procedures specified in paragraph (c)(2)(i) of this section if the test data show a greater than 20 percent discrepancy between the test value and the estimated value, and the results of the engineering assessment shall be included in the Notification of Compliance Status report. For other process vents with variable emission stream characteristics, engineering assessments based on the results of a previous test must be submitted in the Precompliance plan. For engineering assessments based on new tests, the owner or operator must comply with the test notification requirements in § 63.1368(m), and the results of the engineering assessment may be submitted in the Notification of Compliance Status report rather than the Precompliance plan.

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

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

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

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

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

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

(3) *Controlled emissions.* Except for condensers, the owner or operator shall determine controlled emissions using the procedures in either paragraph (c)(3)(i) or (ii) of this section, as applicable. For condensers, controlled emissions shall be calculated using the emission estimation equations described in paragraph (c)(3)(iii) of this section. The owner or operator is not required to calculate controlled emissions from devices described in paragraph (a)(4) of this section or from flares for which compliance is demonstrated in accordance with paragraph (a)(3) of this section. If the owner or operator is complying with an outlet concentration standard and the control device uses supplemental gases, the outlet concentrations shall be corrected in accordance with the procedures described in paragraph (a)(7) of this section.

(i) *Small control devices, except condensers.* Controlled emissions for each process vent that is controlled using a small control device, except for a condenser, shall be determined by using the design evaluation described in paragraph (c)(3)(i)(A) of this section, or by conducting a performance test in accordance with paragraph (c)(3)(ii) of this section.

(A) *Design evaluation.* The design evaluation shall include documentation demonstrating that the control device being used achieves the required control efficiency under absolute or hypothetical peak-case conditions, as determined from the emission profile described in paragraph (b)(11)(iii) of this section. The control efficiency determined from this design evaluation shall be applied to uncontrolled emissions to estimate controlled emissions.

The documentation must be conducted in accordance with the provisions in paragraph (a)(1) of this section. The design evaluation shall also include the value(s) and basis for the parameter(s) monitored under § 63.1366.

(B) Whenever a small control device becomes a large control device, the owner or operator must comply with the provisions in paragraph (c)(3)(ii) of this section and submit the test report in the next Periodic report.

(ii) *Large control devices, except condensers.* Controlled emissions for each process vent that is controlled using a large control device, except for a condenser, shall be determined by applying the control efficiency of the large control device to the estimated uncontrolled emissions. The control efficiency shall be determined by conducting a performance test on the control device as described in paragraphs (c)(3)(ii)(A) through (C) of this section, or by using the results of a previous performance test as described in paragraph (c)(3)(ii)(D) of this section. If the control device is intended to control only HCl and chlorine, the owner or operator may assume the control efficiency of organic HAP is 0 percent. If the control device is intended to control only organic HAP, the owner or operator may assume the control efficiency for HCl and chlorine is 0 percent.

(A) Performance test measurements shall be conducted at both the inlet and outlet of the control device for TOC, total organic HAP, and total HCl and chlorine, as applicable, using the test methods and procedures described in paragraph (b) of this section. Concentrations shall be calculated from the data obtained through emission testing according to the procedures in paragraph (a)(2) of this section.

(B) Performance testing shall be conducted under absolute or hypothetical peak-case conditions, as defined in paragraphs (b)(11)(i) and (ii) of this section.

(C) The owner or operator may elect to conduct more than one performance test on the control device for the purpose of establishing more than one op-

erating condition at which the control device achieves the required control efficiency.

(D) The owner or operator is not required to conduct a performance test for any control device for which a previous performance test was conducted, provided the test was conducted using the same procedures specified in paragraphs (b)(1) through (11) of this section over conditions typical of the absolute or hypothetical peak-case, as defined in paragraphs (b)(11)(i) and (ii) of this section. The results of the previous performance test shall be used to demonstrate compliance.

(iii) *Condensers.* The owner or operator using a condenser as a control device shall determine controlled emissions for each batch emission episode according to the engineering methodology in paragraphs (c)(3)(iii)(A) through (G) of this section. The owner or operator must establish the maximum outlet gas temperature and calculate the controlled emissions using this temperature in the applicable equation. Individual HAP partial pressures shall be calculated as specified in paragraph (c)(2)(i) of this section.

(A) Emissions from vapor displacement due to transfer of material to a vessel shall be calculated using Equation 9 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver.

(B) Emissions from purging shall be calculated using Equation 10 of this subpart with T set equal to the temperature of the receiver and the HAP partial pressures determined at the temperature of the receiver.

(C) Emissions from heating shall be calculated using Equation 29 of this subpart. In Equation 29 of this subpart, Δn is equal to the number of moles of noncondensable displaced from the vessel, as calculated using Equation 12 of this subpart. In Equation 29 of this subpart, the HAP average molecular weight shall be calculated using Equation 14 with the HAP partial pressures determined at the temperature of the receiver.

$$E = \Delta\eta \times \frac{\sum_{i=1}^n P_i}{P_T - \sum_{j=1}^m P_j} \times MW_{HAP} \quad (\text{Eq. 29})$$

Where:

E=mass of HAP emitted
 $\Delta\eta$ =moles of noncondensable gas displaced
 P_T =pressure in the receiver
 P_i =partial pressure of the individual HAP at the receiver temperature
 P_j =partial pressure of the individual condensable VOC (including HAP) at the receiver temperature

n=number of HAP compounds in the emission stream

MW_{HAP} =the average molecular weight of HAP in vapor exiting the receiver, as calculated using Equation 14 of this subpart
 m=number of condensable VOC (including HAP) in the emission stream

(D)(I) Emissions from depressurization shall be calculated using Equation 30 of this subpart.

$$E = (V_{nc1} - V_{nc2}) \times \frac{\sum_{i=1}^n (P_i)}{P_T - \sum_{j=1}^m (P_j)} \times \frac{P_T}{RT} \times MW_{HAP} \quad (\text{Eq. 30})$$

Where:

E=mass of HAP vapor emitted
 V_{nc1} =initial volume of noncondensable in the vessel, corrected to the final pressure, as calculated using Equation 31 of this subpart
 V_{nc2} =final volume of noncondensable in the vessel, as calculated using Equation 32 of this subpart
 P_i =partial pressure of each individual HAP at the receiver temperature
 P_j =partial pressure of each condensable VOC (including HAP) at the receiver temperature
 P_T =receiver pressure
 T=temperature of the receiver, absolute
 R=ideal gas law constant
 MW_{HAP} =the average molecular weight of HAP calculated using Equation 14 of this subpart with partial pressures determined at the receiver temperature
 n=number of HAP compounds in the emission stream
 m=number of condensable VOC (including HAP) in the emission stream

$$V_{nc1} = \frac{VP_{nc1}}{P_T} \quad (\text{Eq. 31})$$

$$V_{nc2} = \frac{VP_{nc2}}{P_T} \quad (\text{Eq. 32})$$

Where:

V_{nc1} =initial volume of noncondensable gas in the vessel
 V_{nc2} =final volume of noncondensable gas in the vessel
 V=free volume in the vessel being depressurized
 P_{nc1} =initial partial pressure of the noncondensable gas, as calculated using Equation 33 of this subpart
 P_{nc2} =final partial pressure of the noncondensable gas, as calculated using Equation 34 of this subpart
 P_T =pressure of the receiver

(3) Initial and final partial pressures of the noncondensable gas in the vessel are determined using Equations 33 and 34 of this subpart.

(2) The initial and final volumes of noncondensable gas present in the vessel, adjusted to the pressure of the receiver, are calculated using Equations 31 and 32 of this subpart.

$$P_{nc1} = P_1 - \sum_{j=1}^m P_j \quad (\text{Eq. 33})$$

$$P_{nc2} = P_2 - \sum_{j=1}^m P_j \quad (\text{Eq. 34})$$

Where:

P_{nc1} =initial partial pressure of the non-condensable gas in the vessel

P_{nc2} =final partial pressure of the noncondensable gas in the vessel

P_1 =initial vessel pressure

P_2 =final vessel pressure

P_j =partial pressure of each condensable VOC (including HAP) in the vessel

m =number of condensable VOC (including HAP) in the emission stream

(E) Emissions from vacuum systems shall be calculated using Equation 26 of this subpart.

(F) Emissions from gas evolution shall be calculated using Equation 8 with V calculated using Equation 27 of this subpart, T set equal to the receiver temperature, and the HAP partial pressures determined at the receiver temperature. The term for time, t , in Equation 10 of this subpart is not needed for the purposes of this calculation.

(G) Emissions from air drying shall be calculated using Equation 9 of this subpart with V equal to the air flow rate and P_1 determined at the receiver temperature.

(d) *Initial compliance with storage vessel provisions.* The owner or operator of an existing or new affected source shall demonstrate initial compliance with the storage vessel standards in § 63.1362(c)(2) through (4) by fulfilling the requirements in either paragraph (d)(1), (2), (3), (4), (5), or (6) of this section, as applicable. The owner or operator shall demonstrate initial compliance with the planned routine maintenance provision in § 63.1362(c)(5) by fulfilling the requirements in paragraph (d)(7) of this section.

(1) *Percent reduction requirement for control devices.* If the owner or operator equips a Group 1 storage vessel with a closed vent system and control device, the owner or operator shall demonstrate initial compliance with the percent reduction requirement of § 63.1362(c)(2)(iv)(A) or (c)(3) either by

calculating the efficiency of the control device using performance test data as specified in paragraph (d)(1)(i) of this section, or by preparing a design evaluation as specified in paragraph (d)(1)(ii) of this section.

(i) *Performance test option.* If the owner or operator elects to demonstrate initial compliance based on performance test data, the efficiency of the control device shall be calculated as specified in paragraphs (d)(1)(i)(A) through (D) of this section.

(A) At the reasonably expected maximum filling rate, Equations 35 and 36 of this subpart shall be used to calculate the mass rate of total organic HAP or TOC at the inlet and outlet of the control device.

$$E_i = K_2 \left(\sum_{j=1}^n C_{ij} M_{ij} \right) Q_i \quad (\text{Eq. 35})$$

$$E_o = K_2 \left(\sum_{j=1}^n C_{oj} M_{oj} \right) Q_o \quad (\text{Eq. 36})$$

Where:

C_{ij} , C_{oj} = concentration of sample component j of the gas stream at the inlet and outlet of the control device, respectively, dry basis, ppmv

E_i , E_o = mass rate of total organic HAP or TOC at the inlet and outlet of the control device, respectively, dry basis, kg/hr

M_{ij} , M_{oj} = molecular weight of sample component j of the gas stream at the inlet and outlet of the control device, respectively, g/gmole

Q_i , Q_o = flow rate of gas stream at the inlet and outlet of the control device, respectively, dscmm

K_2 = constant, 2.494×10^{-6} (parts per million)⁻¹ (gram-mole per standard cubic meter) (kilogram/gram) (minute/hour), where standard temperature is 20 °C.

(B) The percent reduction in total organic HAP or TOC shall be calculated using Equation 37 of this subpart:

$$R = \frac{E_i - E_o}{E_i} (100) \quad (\text{Eq. 37})$$

Where:

R = control efficiency of control device, percent

E_i = mass rate of total organic HAP or TOC at the inlet to the control device as calculated under paragraph (d)(1)(i)(A) of

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this section, kilograms organic HAP per hour

E_o = mass rate of total organic HAP or TOC at the outlet of the control device, as calculated under paragraph (d)(1)(i)(A) of this section, kilograms organic HAP per hour.

(C) A performance test is not required to be conducted if the control device used to comply with § 63.1362(c) (storage tank provisions) is also used to comply with § 63.1362(b) (process vent provisions), provided compliance with § 63.1362(b) is demonstrated in accordance with paragraph (c) of this section and the demonstrated percent reduction is equal to or greater than 95 percent.

(D) A performance test is not required for any control device for which a previous test was conducted, provided the test was conducted using the same procedures specified in paragraph (b) of this section.

(ii) *Design evaluation option.* If the owner or operator elects to demonstrate initial compliance by conducting a design evaluation, the owner or operator shall prepare documentation in accordance with the design evaluation provisions in paragraph (a)(1) of this section, as applicable. The design evaluation shall demonstrate that the control device being used achieves the required control efficiency when the storage vessel is filled at the reasonably expected maximum filling rate.

(2) *Outlet concentration requirement for control devices.* If the owner or operator equips a Group 1 storage vessel with a closed vent system and control device, the owner or operator shall demonstrate initial compliance with the outlet concentration requirements of § 63.1362(c)(2)(iv)(B) or (c)(3) by fulfilling the requirements of paragraph (a)(6) of this section.

(3) *Floating roof.* If the owner or operator equips a Group 1 storage vessel with a floating roof to comply with the provisions in § 63.1362(c)(2) or (c)(3), the owner or operator shall demonstrate initial compliance by complying with the procedures described in paragraphs (d)(3)(i) and (ii) of this section.

(i) Comply with § 63.119(b), (c), or (d) of subpart G of this part, as applicable, with the differences specified in § 63.1362(d)(2)(i) through (iii).

(ii) Comply with the procedures described in § 63.120(a), (b), or (c), as applicable, with the differences specified in paragraphs (d)(3)(ii)(A) through (C) of this section.

(A) When the term “storage vessel” is used in § 63.120, the definition of the term “storage vessel” in § 63.1361 shall apply for the purposes of this subpart.

(B) When the phrase “the compliance date specified in § 63.100 of subpart F of this part” is referred to in § 63.120, the phrase “the compliance date specified in § 63.1364” shall apply for the purposes of this subpart.

(C) When the phrase “the maximum true vapor pressure of the total organic HAP in the stored liquid falls below the values defining Group 1 storage vessels specified in Table 5 or Table 6 of this subpart” is referred to in § 63.120(b)(1)(iv), the phrase “the maximum true vapor pressure of the total organic HAP in the stored liquid falls below the values defining Group 1 storage vessels specified in § 63.1361” shall apply for the purposes of this subpart.

(4) *Flares.* If the owner or operator controls the emissions from a Group 1 storage vessel with a flare, initial compliance is demonstrated by fulfilling the requirements in paragraph (a)(3) of this section.

(5) *Exemptions from initial compliance.* No initial compliance demonstration is required for control devices specified in paragraph (a)(4) of this section.

(6) *Initial compliance with alternative standard.* If the owner or operator equips a Group 1 storage vessel with a closed-vent system and control device, the owner or operator shall demonstrate initial compliance with the alternative standard in § 63.1362(c)(4) by fulfilling the requirements of paragraph (a)(5) of this section.

(7) *Planned routine maintenance.* The owner or operator shall demonstrate initial compliance with the planned routine maintenance provisions of § 63.1362(c)(5) by including the anticipated periods of planned routine maintenance for the first reporting period in the Notification of Compliance Status report as specified in § 63.1368(f).

(e) *Initial compliance with wastewater provisions.* The owner or operator shall demonstrate initial compliance with

the wastewater requirements by complying with the applicable provisions in § 63.145, except that the owner or operator need not comply with the requirement to determine visible emissions that is specified in § 63.145(j)(1), and references to compounds in Table 8 of subpart G of this part are not applicable for the purposes of this subpart. When § 63.145(i) refers to Method 18 of 40 CFR part 60, appendix A-6, the owner or operator may use any method specified in § 63.1362(d)(12) to demonstrate initial compliance with this subpart.

(f) *Initial compliance with the bag dump and product dryer provisions.* Compliance with the particulate matter concentration limits specified in § 63.1362(e) is demonstrated when the concentration of particulate matter is less than 0.01 gr/dscf, as measured using the method described in paragraph (b)(7) of this section.

(g) *Initial compliance with the pollution prevention alternative standard.* The owner or operator shall demonstrate initial compliance with § 63.1362(g)(2) and (3) for a PAI process unit by preparing the demonstration summary in accordance with paragraph (g)(1) of this section and by calculating baseline and target annual HAP and VOC factors in accordance with paragraphs (g)(2) and (3) of this section. To demonstrate initial compliance with § 63.1362(g)(3), the owner or operator must also comply with the procedures for add-on control devices that are specified in paragraph (g)(4) of this section.

(1) *Demonstration summary.* The owner or operator shall prepare a pollution prevention demonstration summary that shall contain, at a minimum, the information in paragraphs (g)(1)(i) through (iii) of this section. The demonstration summary shall be included in the Precompliance report as specified in § 63.1368(e)(4).

(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 (g)(1)(i) and (ii) of this

section including, but not limited to, operator log sheets and copies of daily, monthly, and annual inventories of materials and products. The owner or operator must show how this documentation will be used to calculate the annual factors required in § 63.1366(f)(1).

(2) *Baseline factors.* The baseline HAP and VOC factors shall be calculated 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 1987 through 1989 calendar years. Alternatively, for a process that has been operational for less than 3 years, but more than 1 year, the baseline factors shall be established for the time period from startup of the process until the present.

(3) *Target annual factors.* The owner or operator must calculate target annual factors in accordance with either paragraph (g)(3)(i) or (ii) of this section.

(i) To demonstrate initial compliance with § 63.1362(g)(2), the target annual HAP factor must be equal to or less than 15 percent of the baseline HAP factor. For each reduction in a HAP that is also a VOC, the target annual VOC factor must be lower than the baseline VOC factor by an equivalent amount on a mass basis. For each reduction in a HAP that is not a VOC, the target annual factor must be equal to or less than the baseline VOC factor.

(ii) To demonstrate initial compliance with § 63.1362(g)(3)(i), the target annual HAP and VOC factors must be calculated as specified in paragraph (g)(3)(i) of this section, except that when “15 percent” is referred to in paragraph (g)(3)(i) of this section, “50 percent” shall apply for the purposes of this paragraph.

(4) *Requirements for add-on control devices.* Initial compliance with the requirements for add-on control devices in § 63.1362(g)(3)(ii) is demonstrated when the requirements in paragraphs (g)(4)(i) through (iii) of this section are met.

(i) The yearly reductions associated with add-on controls that meet the criteria of § 63.1362(g)(3)(ii)(A) through (D), must be equal to or greater than the

amounts calculated using Equations 38 and 39 of this subpart:

$$\text{HAP}_{\text{reduced}} = (\text{HF}_{\text{base}})(0.85 - R_{\text{P2}})(M_{\text{prod}}) \quad (\text{Eq. 38})$$

$$\text{VOC}_{\text{reduced}} = (\text{VF}_{\text{base}} - \text{VF}_{\text{P2}} - \text{VF}_{\text{annual}}) \times M_{\text{prod}} \quad (\text{Eq. 39})$$

Where:

$\text{HAP}_{\text{reduced}}$ = the annual HAP emissions reduction required by add-on controls, kg/yr

HF_{base} = the baseline HAP factor, kg HAP consumed/kg product

R_{P2} = the fractional reduction in the annual HAP factor achieved using pollution prevention where R_{P2} is ≥ 0.5

$\text{VOC}_{\text{reduced}}$ = required VOC emission reduction from add-on controls, kg/yr

VF_{base} = baseline VOC factor, kg VOC emitted/kg production

VF_{P2} = reduction in VOC factor achieved by pollution prevention, kg VOC emitted/kg production

$\text{VF}_{\text{annual}}$ = target annual VOC factor, kg VOC emitted/kg production

M_{prod} = production rate, kg/yr

(ii) Demonstration that the criteria in § 63.1362(g)(3)(ii)(A) through (D) are met shall be accomplished through a description of the control device and of the material streams entering and exiting the control device.

(iii) The annual reduction achieved by the add-on control shall be quantified using the methods described in paragraph (c) of this section.

(h) *Compliance with emissions averaging provisions.* An owner or operator shall demonstrate compliance with the emissions averaging provisions of § 63.1362(h) by fulfilling the requirements of paragraphs (h)(1) through (6) of this section.

(1) The owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all the information required in § 63.1367(d). The Emissions Averaging Plan shall be submitted no later than 18 months prior to the compliance date of the standard. The Administrator shall determine within 120 calendar days whether the Emissions Averaging Plan submitted by sources using emissions averaging presents sufficient information. The Administrator shall either approve the Emissions Averaging Plan, request changes, or request that the

owner or operator submit additional information. Once the Administrator receives sufficient information, the Administrator shall approve, disapprove, or request changes to the plan within 120 days. If the Emissions Averaging Plan is disapproved, the owner or operator must still be in compliance with the standard by the compliance date.

(2) For all points included in an emissions average, the owner or operator shall comply with the procedures that are specified in paragraphs (h)(2)(i) through (v) of this section.

(i) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the standard for those emission points. Equations in paragraph (h)(5) of this section shall be used to calculate debits.

(ii) Calculate and record monthly credits for all Group 1 and Group 2 emission points that are overcontrolled to compensate for the debits. Equations in paragraph (h)(6) of this section shall be used to calculate credits. All process vent, storage vessel, and wastewater emission points except those specified in § 63.1362(h)(1) through (6) may be included in the credit calculation.

(iii) Demonstrate that annual credits calculated according to paragraph (h)(6) of this section are greater than or equal to debits calculated according to paragraph (h)(5) of this section for the same annual compliance period. The initial demonstration in the Emissions Averaging Plan or operating permit application that credit-generating emission points will be capable of generating sufficient credits to offset the debit-generating emission points shall be made under representative operating conditions. After the compliance date, actual operating data shall be

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used for all debit and credit calculations.

(iv) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (h)(5) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h)(6) of this section. Compliance for the quarter shall be determined based on the ratio of credits and debits from that quarter, with 30 percent more debits than credits allowed on a quarterly basis.

(v) Record and report quarterly and annual credits and debits as required in §§ 63.1367(d) and 63.1368(d).

(3) [Reserved]

(4) During periods of monitoring excursions, credits and debits shall be adjusted as specified in paragraphs (h)(4)(i) through (iii) of this section.

(i) No credits shall be assigned to the credit-generating emission point.

(ii) Maximum debits shall be assigned to the debit-generating emission point.

(iii) The owner or operator may demonstrate to the Administrator that full or partial credits or debits should be assigned using the procedures in § 63.150(l) of subpart G of this part.

(5) Debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or controlled to a level less stringent than the applicable standard and the emissions allowed for the Group 1 emission point. Debits shall be calculated in accordance with the procedures specified in paragraphs (h)(5)(i) through (iv) of this section.

(i) Source-wide debits shall be calculated using Equation 40 of this subpart.

Debits and all terms of Equation 40 of this subpart are in units of Mg/month

$$\text{Debits} = \sum_{i=1}^n [\text{EPV}_{iA} - (0.10)(\text{EPV}_{iU})] + \sum_{i=1}^n [\text{ES}_{iA} - (0.05)(\text{ES}_{iU})] + \sum_{i=1}^n [\text{EWW}_{iA} - (\text{EWW}_{iC})] \quad (\text{Eq. 40})$$

Where:

EPV_{iU} = uncontrolled emissions from process i calculated according to the procedures specified in paragraph (h)(5)(ii) of this section

EPV_{iA} = actual emissions from each Group 1 process i that is uncontrolled or is controlled to a level less stringent than the applicable standard. EPV_{iA} is calculated using the procedures in paragraph (h)(5)(ii) of this section

ES_{iU} = uncontrolled emissions from storage vessel i calculated according to the procedures specified in paragraph (h)(5)(iii) of this section

ES_{iA} = actual emissions from each Group 1 storage vessel i that is uncontrolled or is controlled to a level less stringent than the applicable standard. ES_{iA} is calculated using the procedures in paragraph (h)(5)(iii) of this section

EWW_{iC} = emissions from each Group 1 wastewater stream i if the standard had been applied to the uncontrolled emissions. EWW_{iC} is calculated using the procedures in paragraph (h)(5)(iv) of this section

EWW_{iA} = actual emissions from each Group 1 wastewater stream i that is uncontrolled or is controlled to a level less stringent than the applicable standard. EWW_{iA} is

calculated using the procedures in paragraph (h)(5)(iv) of this section

n = the number of emission points being included in the emissions average; the value of n is not necessarily the same for process vents, storage tanks, and wastewater

(ii) Emissions from process vents shall be calculated in accordance with the procedures specified in paragraphs (h)(5)(ii)(A) through (C) of this section.

(A) Except as provided in paragraph (h)(5)(ii)(C) of this section, uncontrolled emissions for process vents shall be calculated using the procedures that are specified in paragraph (c)(2) of this section.

(B) Except as provided in paragraph (h)(5)(ii)(C) of this section, actual emissions for process vents shall be calculated using the procedures specified in paragraphs (c)(2) and (c)(3) of this section, as applicable.

(C) As an alternative to the procedures described in paragraphs (h)(5)(ii)(A) and (B) of this section, for continuous processes, uncontrolled and actual emissions may be calculated by

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the procedures described in § 63.150(g)(2) of subpart G of this part. For purposes of complying with this paragraph, a 90 percent reduction shall apply instead of the 98 percent reduction in § 63.150(g)(2)(iii) of subpart G of this part, and the term “process condenser” shall apply instead of the term “recovery device” in § 63.150(g)(2) for the purposes of this subpart.

(iii) Uncontrolled emissions from storage vessels shall be calculated in accordance with the procedures described in paragraph (d)(1) of this section. Actual emissions from storage vessels shall be calculated using the procedures specified in § 63.150(g)(3)(ii), (iii), or (iv) of subpart G of this subpart, as appropriate, except that when § 63.150(g)(3)(ii)(B) refers to the procedures in § 63.120(d) for determining percent reduction for a control device, § 63.1365(d)(2) or (3) shall apply for the purposes of this subpart.

(iv) Emissions from wastewater shall be calculated using the procedures specified in § 63.150(g)(5) of subpart G of this part.

(6) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emissions from that Group 1 or Group 2 emission point that have been controlled after November 15, 1990 to a level more stringent than what is required in this subpart or any other State or Federal rule or statute. Credits shall be calculated in accordance with the procedures specified in paragraphs (h)(6)(i) through (v) of this section.

(i) Source-wide credits shall be calculated using Equation 41 of this subpart. Credits and all terms in Equation 41 of this subpart are in units of Mg/month, the baseline date is November 15, 1990, the terms consisting of a constant multiplied by the uncontrolled emissions are the emissions from each emission point subject to the standards in § 63.1362(b) and (c) that is controlled to a level more stringent than the standard.

$$\begin{aligned} \text{Credits} = & D \sum_{i=1}^n [(0.10)(\text{EPV1}_{1U}) - \text{EPV1}_{1A}] + D \sum_{i=1}^m (\text{EPV2}_{2B} - \text{EPV2}_{2A}) + D \sum_{i=1}^n [(0.05)(\text{ES1}_{1U}) - \text{ES1}_{1A}] + \\ & D \sum_{i=1}^m (\text{ES2}_{2B} - \text{ES2}_{2A}) + D \sum_{i=1}^n (\text{EWW1}_{1C} - \text{EWW1}_{1A}) + D \sum_{i=1}^m (\text{EWW2}_{2B} - \text{EWW2}_{2A}) \quad (\text{Eq. 41}) \end{aligned}$$

Where:

EPV1_{1U} = uncontrolled emissions from each Group 1 process i calculated according to the procedures in paragraph (h)(6)(iii)(A) of this section

EPV1_{1A} = actual emissions from each Group 1 process i that is controlled to a level more stringent than the applicable standard. EPV1_{1A} is calculated according to the procedures in paragraph (h)(6)(iii)(B) of this section

EPV2_{2B} = emissions from each Group 2 process i at the baseline date. EPV2_{2B} is calculated according to the procedures in paragraph (h)(6)(iii)(C) of this section

EPV2_{2A} = actual emissions from each Group 2 process i that is controlled. EPV2_{2A} is calculated according to the procedures in paragraph (h)(6)(iii)(C) of this section

ES1_{1U} = uncontrolled emissions from each Group 1 storage vessel i calculated according to the procedures in paragraph (h)(6)(iv) of this section

ES1_{1A} = actual emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the applicable standard. ES1_{1A} is calculated according to the procedures in paragraph (h)(6)(iv) of this section

ES2_{2B} = emissions from each Group 2 storage vessel i at the baseline date. ES2_{2B} is calculated according to the procedures in paragraph (h)(6)(iv) of this section

ES2_{2A} = actual emissions from each Group 2 storage vessel i that is controlled. ES2_{2A} is calculated according to the procedures in paragraph (h)(6)(iv) of this section

EWW1_{1C} = emissions from each Group 1 wastewater stream i if the standard had been applied to the uncontrolled emissions. EWW1_{1C} is calculated according to the procedures in paragraph (h)(6)(v) of this section

EWW1_{1A} = emissions from each Group 1 wastewater stream i that is controlled to a level more stringent than the applicable standard. EWW1_{1A} is calculated according

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to the procedures in paragraph (h)(6)(v) of this section

EW_{2B} = emissions from each Group 2 wastewater stream i at the baseline date. EW_{2B} is calculated according to the procedures in paragraph (h)(6)(v) of this section

EW_{2A} = actual emissions from each Group 2 wastewater stream i that is controlled. EW_{2A} is calculated according to the procedures in paragraph (h)(6)(v) of this section

n = number of Group 1 emission points that are included in the emissions average. The value of n is not necessarily the same for process vents, storage tanks, and wastewater

m = number of Group 2 emission points included in the emissions average. The value of m is not necessarily the same for process vents, storage tanks, and wastewater

D = discount factor equal to 0.9 for all credit-generating emission points except those controlled by a pollution prevention measure, which will not be discounted

(ii) For an emission point controlled using a pollution prevention measure, the nominal efficiency for calculating credits shall be as determined as described in § 63.150(j) of subpart G of this part.

(iii) Emissions from process vents shall be calculated in accordance with the procedures specified in paragraphs (h)(6)(iii)(A) through (C) of this section.

(A) Uncontrolled emissions from Group 1 process vents shall be calculated according to the procedures in paragraph (h)(5)(ii)(A) or (C) of this section.

(B) Actual emissions from Group 1 process vents with a nominal efficiency greater than the applicable standard or a pollution prevention measure that achieves reductions greater than the applicable standard shall be calculated using Equation 42 of this subpart:

$$EPV_{1A} = EPV_{1U} \times [1 - N_{eff}/100] \quad (\text{Eq. 42})$$

Where:

EPV_{1A} = actual emissions from each Group 1 process i that is controlled to a level more stringent than the applicable standard

EPV_{1U} = uncontrolled emissions from each Group 1 process i

N_{eff} = nominal efficiency of control device or pollution prevention measure, percent

(C) Baseline and actual emissions from Group 2 process vents shall be calculated according to the procedures in § 63.150(h)(2)(iii) and (iv) with the following modifications:

(1) The term “90 percent reduction” shall apply instead of the term “98 percent reduction”; and

(2) When the phrase “paragraph (g)(2)” is referred to in § 63.150(h)(2)(iii) and (iv), the provisions in paragraph (h)(5)(ii) of this section shall apply for the purposes of this subpart.

(iv) Uncontrolled emissions from storage vessels shall be calculated according to the procedures described in paragraph (d)(1) of this section. Actual and baseline emissions from storage tanks shall be calculated according to the procedures specified in § 63.150(h)(3) of subpart G of this part, except when

§ 63.150(h)(3) refers to § 63.150(g)(3)(i), paragraph (d)(1) of this section shall apply for the purposes of this subpart.

(v) Emissions from wastewater shall be calculated using the procedures in § 63.150(h)(5) of subpart G of this part.

[64 FR 33589, June 23, 1999, as amended at 67 FR 59347, Sept. 20, 2002; 79 FR 17374, Mar. 27, 2014]

§ 63.1366 Monitoring and inspection requirements.

(a) To provide evidence of continued compliance with the standard, the owner or operator of any existing or new affected source shall install, operate, and maintain monitoring devices as specified in this section. During the initial compliance demonstration, maximum or minimum operating parameter levels, or other design and operating characteristics, as appropriate, shall be established for emission sources that will indicate the source is in compliance. Test data, calculations, or information from the evaluation of

the control device design, as applicable, shall be used to establish the operating parameter level or characteristic.

(b) *Monitoring for control devices*—(1) *Parameters to monitor.* Except as specified in paragraph (b)(1)(i) of this section, for each control device, the owner or operator shall install and operate monitoring devices and operate within the established parameter levels to ensure continued compliance with the standard. Monitoring parameters are specified for control scenarios in paragraphs (b)(1)(ii) through (xii) of this section, and are summarized in Table 3 of this subpart.

(i) *Periodic verification.* For control devices that control vent streams containing total HAP emissions less than 0.91 Mg/yr, before control, monitoring shall consist of a periodic verification that the device is operating properly. This verification shall include, but not be limited to, a daily or more frequent demonstration that the unit is working as designed and may include the daily measurements of the parameters described in paragraphs (b)(1)(ii) through (xii) of this section. This demonstration shall be included in the Precompliance plan, to be submitted 6 months prior to the compliance date of the standard.

(ii) *Scrubbers.* For affected sources using liquid scrubbers, the owner or operator shall establish a minimum scrubber liquid flow rate or pressure drop as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the scrubber is controlling HAP from an emission stream as required by the standards in § 63.1362. If the scrubber uses a caustic solution to remove acid emissions, the pH of the effluent scrubber liquid shall also be monitored once a day. The minimum scrubber liquid flow rate or pressure drop shall be based on the conditions under which the initial compliance demonstration was conducted. Alternatively, for halogen scrubbers, the owner or operator may comply with the requirements specified in § 63.994(c).

(A) The monitoring device used to determine the pressure drop shall be certified by the manufacturer to be accurate to within a gage pressure of ±10

percent of the maximum pressure drop measured.

(B) The monitoring device used for measurement of scrubber liquid flowrate shall be certified by the manufacturer to be accurate to within ±10 percent of the design scrubber liquid flowrate.

(C) The monitoring device shall be calibrated annually.

(iii) *Condensers.* For each condenser, the owner or operator shall establish the maximum condenser outlet gas temperature as a site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the condenser is controlling HAP from an emission stream as required by the standards in § 63.1362.

(A) The temperature monitoring device must be accurate to within ±2 percent of the temperature measured in degrees Celsius or ±2.5 °C, whichever is greater.

(B) The temperature monitoring device must be calibrated annually.

(iv) *Regenerative carbon adsorbers.* For each regenerative carbon adsorber, the owner or operator shall comply with the provisions in paragraphs (b)(1)(iv)(A) through (F) of this section.

(A) Establish the regeneration cycle characteristics specified in paragraphs (b)(1)(iv)(A) (1) through (4) of this section under absolute or hypothetical peak-case conditions, as defined in § 63.1365(b)(11)(i) or (ii).

(1) Minimum regeneration frequency (i.e., operating time since last regeneration);

(2) Minimum temperature to which the bed is heated during regeneration;

(3) Maximum temperature to which the bed is cooled, measured within 15 minutes of completing the cooling phase; and

(4) Minimum regeneration stream flow.

(B) Monitor and record the regeneration cycle characteristics specified in paragraphs (b)(1)(iv)(B) (1) through (4) of this section for each regeneration cycle.

(1) Regeneration frequency (i.e., operating time since end of last regeneration);

(2) Temperature to which the bed is heated during regeneration;

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(3) Temperature to which the bed is cooled, measured within 15 minutes of the completion of the cooling phase; and

(4) Regeneration stream flow.

(C) Use a temperature monitoring device that is accurate to within ± 2 percent of the temperature measured in degrees Celsius or ± 2.5 °C, whichever is greater.

(D) Use a regeneration stream flow monitoring device capable of recording the total regeneration stream flow to within ± 10 percent of the established value (i.e., accurate to within ± 10 percent of the reading).

(E) Calibrate the temperature and flow monitoring devices annually.

(F) Conduct an annual check for bed poisoning in accordance with manufacturer's specifications.

(v) *Nonregenerative carbon adsorbers.* For each nonregenerative carbon adsorption system such as a carbon canister that does not regenerate the carbon bed directly onsite in the control device, the owner or operator shall replace the existing carbon bed in the control device with fresh carbon on a regular schedule based on one of the following procedures:

(A) Monitor the TOC concentration level in the exhaust vent stream from the carbon adsorption system on a regular schedule, and replace the existing carbon with fresh carbon immediately when carbon breakthrough is indicated. The monitoring frequency shall be daily or at an interval no greater than 20 percent of the time required to consume the total carbon working capacity under absolute or hypothetical peak-case conditions as defined in § 63.1365(b)(11)(i) or (ii), whichever is longer.

(B) Establish the maximum time interval between replacement, and replace the existing carbon before this time interval elapses. The time interval shall be established based on the conditions anticipated under absolute or hypothetical peak-case, as defined in § 63.1365(b)(11)(i) or (ii).

(vi) *Flares.* For each flare, the presence of the pilot flame shall be monitored at least once every 15 minutes during the period in which the flare is controlling HAP from an emission stream subject to the standards in

§ 63.1362. The monitoring device shall be calibrated annually.

(vii) *Thermal incinerators.* For each thermal incinerator, the owner or operator shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be measured and recorded at least once every 15 minutes during the period in which the combustion device is controlling HAP from an emission stream subject to the standards in § 63.1362.

(A) The temperature monitoring device must be accurate to within ± 0.75 percent of the temperature measured in degrees Celsius or ± 2.5 °C, whichever is greater.

(B) The monitoring device must be calibrated annually.

(viii) *Catalytic incinerators.* For each catalytic incinerator, the parameter levels that the owner or operator shall establish are the minimum temperature of the gas stream immediately before the catalyst bed and the minimum temperature difference across the catalyst bed. The owner or operator shall monitor the temperature of the gas stream immediately before and after the catalyst bed, and calculate the temperature difference across the catalyst bed, at least once every 15 minutes during the period in which the catalytic incinerator is controlling HAP from an emission stream subject to the standards in § 63.1362.

(A) The temperature monitoring devices must be accurate to within ± 0.75 percent of the temperature measured in degrees Celsius or ± 2.5 °C, whichever is greater.

(B) The temperature monitoring devices must be calibrated annually.

(ix) *Process heaters and boilers.* (A) Except as specified in paragraph (b)(1)(ix)(B) of this section, for each boiler or process heater, the owner or operator shall monitor the temperature of the gases exiting the combustion chamber as the site-specific operating parameter which must be monitored and recorded at least every 15 minutes during the period in which the boiler or process heater is controlling HAP from an emission stream subject to the standards in § 63.1362.

(I) The temperature monitoring device must be accurate to within ± 0.75

percent of the temperature measured in degrees Celsius or ± 2.5 °C, whichever is greater.

(2) The temperature monitoring device must be calibrated annually.

(B) The owner or operator is exempt from the monitoring requirements specified in paragraph (b)(1)(ix)(A) of this section if either:

(1) All vent streams are introduced with primary fuel; or

(2) The design heat input capacity of the boiler or process heater is 44 megawatts or greater.

(x) *Continuous emission monitor*. As an alternative to the parameters specified in paragraphs (b)(1)(ii) through (ix) of this section, an owner or operator may monitor and record the outlet HAP concentration or both the outlet TOC concentration and outlet total HCl and chlorine concentration at least every 15 minutes during the period in which the control device is controlling HAP from an emission stream subject to the standards in § 63.1362. The owner or operator need not monitor the total HCl and chlorine concentration if the owner or operator determines that the emission stream does not contain HCl or chlorine. The owner or operator need not monitor the TOC concentration if the owner or operator determines the emission stream does not contain organic compounds. The HAP or TOC monitor must meet the requirements of Performance Specification 8 or 9 of appendix B of part 60 and must be installed, calibrated, and maintained, according to § 63.8 of subpart A of this part. As part of the QA/QC Plan, calibration of the device must include, at a minimum, quarterly cylinder gas audits. If supplemental gases are introduced before the control device, the monitored concentration shall be corrected as specified in § 63.1365(a)(7).

(xi) *Fabric filters*. For each fabric filter used to control particulate matter emissions from bag dumps and product dryers subject to § 63.1362(e), the owner or operator shall install, calibrate, maintain, and continuously operate a bag leak detection system that meets the requirements in paragraphs (b)(1)(xi)(A) through (G) of this section.

(A) The bag leak detection system sensor must provide output of relative particulate matter emissions.

(B) The bag leak detection system must be equipped with an alarm system that will sound when an increase in particulate matter emissions over a preset level is detected.

(C) For positive pressure fabric filters, a bag leak detector must be installed in each fabric filter compartment or cell. If a negative pressure or induced air filter is used, the bag leak detector must be installed downstream of the fabric filter. Where multiple bag leak detectors are required (for either type of fabric filter), the system instrumentation and alarm may be shared among detectors.

(D) The bag leak detection system shall be installed, operated, calibrated and maintained in a manner consistent with available guidance from the U.S. Environmental Protection Agency or, in the absence of such guidance, the manufacturer's written specifications and instructions.

(E) Calibration of the system shall, at a minimum, consist of establishing the relative baseline output level by adjusting the range and the averaging period of the device and establishing the alarm set points and the alarm delay time.

(F) Following initial adjustment, the owner or operator shall not adjust the sensitivity or range, averaging period, alarm set points, or alarm delay time, except as established in an operation and maintenance plan that is to be submitted with the Precompliance plan. In no event shall the sensitivity be increased more than 100 percent or decreased by more than 50 percent over a 365-day period unless such adjustment follows a complete baghouse inspection which demonstrates the baghouse is in good operating condition.

(G) If the alarm on a bag leak detection system is triggered, the owner or operator shall, within 1 hour of an alarm, initiate the procedures to identify the cause of the alarm and take corrective action as specified in the corrective action plan.

(xii) For each waste management unit, treatment process, or control device used to comply with § 63.1362(d), the owner or operator shall comply with the procedures specified in § 63.143 of subpart G of this part, except that

when the procedures to request approval to monitor alternative parameters according to the procedures in § 63.151(f) are referred to in § 63.143(d)(3), the procedures in paragraph (b)(4) of this section shall apply for the purposes of this subpart.

(xiii) *Closed-vent system visual inspections.* The owner or operator shall comply with the requirements in either paragraph (b)(1)(xiii)(A) or (B) of this section:

(A) Set the flow indicator at the entrance to any bypass line that could divert the stream away from the control device to the atmosphere to take a reading at least once every 15 minutes; or

(B) If the bypass device valve is installed at the inlet to the bypass device is secured in the closed position with a car-seal or lock-and-key type configuration, visually inspect the seal or closure mechanism at least once every month to verify that the valve is maintained in the closed position and the vent stream is not diverted through the bypass line.

(2) *Averaging periods.* Averaging periods for parametric monitoring levels shall be established according to paragraphs (b)(2)(i) through (iii) of this section.

(i) Except as provided in paragraph (b)(2)(iii) of this section, a daily (24-hour) or block average shall be calculated as the average of all values for a monitored parameter level set according to the procedures in (b)(3)(iii) of this section recorded during the operating day or block.

(ii) The operating day or block shall be defined in the Notification of Compliance Status report. The operating day may be from midnight to midnight or another continuous 24-hour period. The operating block may be used as an averaging period only for vents from batch operations, and is limited to a period of time that is, at a maximum, equal to the time from the beginning to end of a series of consecutive batch operations.

(iii) Monitoring values taken during periods in which the control devices are not controlling HAP from an emission stream subject to the standards in § 63.1362, as indicated by periods of no flow or periods when only streams that

are not subject to the standards in § 63.1362 are controlled, shall not be considered in the averages. Where flow to the device could be intermittent, the owner or operator shall install, calibrate and operate a flow indicator at the inlet or outlet of the control device to identify periods of no flow.

(3) *Procedures for setting parameter levels for control devices used to control emissions from process vents.* (i) *Small control devices.* Except as provided in paragraph (b)(1)(i) of this section, for devices controlling less than 10 tons/yr of HAP for which a performance test is not required, the parametric levels shall be set based on the design evaluation required in § 63.1365(c)(3)(i)(A). If a performance test is conducted, the monitoring parameter level shall be established according to the procedures in paragraph (b)(3)(ii) of this section.

(ii) *Large control devices.* For devices controlling greater than or equal to 10 tons/yr of HAP for which a performance test is required, the parameter level must be established as follows:

(A) If the operating parameter level to be established is a maximum or minimum, it must be based on the average of the average values from each of the three test runs.

(B) The owner or operator may establish the parametric monitoring level(s) based on the performance test supplemented by engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values. The rationale for the specific level for each parameter, including any data and calculations used to develop the level(s) and a description of why the level indicates proper operation of the control device shall be provided in the Precompliance plan. Determination of the parametric monitoring level using these procedures is subject to review and approval by the Administrator.

(iii) *Parameter levels for control devices controlling batch process vents.* For devices controlling batch process vents alone or in combination with other streams, the level(s) shall be established in accordance with paragraph (b)(3)(iii)(A) or (B) of this section.

(A) A single level for the batch process(es) shall be calculated from the initial compliance demonstration.

(B) The owner or operator may establish separate levels for each batch emission episode or combination of emission episodes selected to be controlled. If separate monitoring levels are established, the owner or operator must provide a record indicating at what point in the daily schedule or log of processes required to be recorded per the requirements of § 63.1367(b)(7), the parameter being monitored changes levels and must record at least one reading of the new parameter level, even if the duration of monitoring for the new parameter level is less than 15 minutes.

(4) *Requesting approval to monitor alternative parameters.* The owner or operator may request approval to monitor parameters other than those required by paragraphs (b)(1)(ii) through (xiii) of this section. The request shall be submitted according to the procedures specified in § 63.8(f) of subpart A of this part or in the Precompliance report (as specified in § 63.1368(e)).

(5) *Monitoring for the alternative standards.* (i) For control devices that are used to comply with the provisions of § 63.1362(b)(6) and (c)(4), the owner or operator shall monitor and record the outlet TOC concentration and the outlet total HCl and chlorine concentration at least once every 15 minutes during the period in which the device is controlling HAP from emission streams subject to the standards in § 63.1362. A TOC monitor meeting the requirements of Performance Specification 8 or 9 of appendix B of 40 CFR part 60 shall be installed, calibrated, and maintained, according to § 63.8. The owner or operator need not monitor the total HCl and chlorine concentration if the owner or operator determines that the emission stream does not contain HCl or chlorine. The owner or operator need not monitor for TOC concentration if the owner or operator determines that the emission stream does not contain organic compounds.

(ii) If supplemental gases are introduced before the control device, the owner or operator must either correct for supplemental gases as specified in § 63.1365(a)(7) or, if using a combustion

control device, comply with the requirements of paragraph (b)(5)(ii)(A) of this section. If the owner or operator corrects for supplemental gases as specified in § 63.1365(a)(7)(ii) for non-combustion control devices, the flow rates must be evaluated as specified in paragraph (b)(5)(ii)(B) of this section.

(A) *Provisions for combustion devices.* As an alternative to correcting for supplemental gases as specified in § 63.1365(a)(7), the owner or operator may monitor residence time and firebox temperature according to the requirements of paragraphs (b)(5)(ii)(A)(1) and (2) of this section. Monitoring of residence time may be accomplished by monitoring flow rate into the combustion chamber.

(1) If complying with the alternative standard instead of achieving a control efficiency of 95 percent or less, the owner or operator must maintain a minimum residence time of 0.5 seconds and a minimum combustion chamber temperature of 760 °C.

(2) If complying with the alternative standard instead of achieving a control efficiency of 98 percent, the owner or operator must maintain a minimum residence time of 0.75 seconds and a minimum combustion chamber temperature of 816 °C.

(B) *Flow rate evaluation for non-combustion devices.* To demonstrate continuous compliance with the requirement to correct for supplemental gases as specified in § 63.1365(a)(7)(ii) for non-combustion devices, the owner or operator must evaluate the volumetric flow rate of supplemental gases, V_s , and the volumetric flow rate of all gases, V_a , each time a new operating scenario is implemented based on process knowledge and representative operating data. The procedures used to evaluate the flow rates, and the resulting correction factor used in Equation 8 of this subpart, must be included in the Notification of Compliance Status report and in the next Periodic report submitted after an operating scenario change.

(6) *Exceedances of operating parameters.* An exceedance of an operating parameter is defined as one of the following:

(i) If the parameter level, averaged over the operating day or block, is below a minimum value established

during the initial compliance demonstration.

(ii) If the parameter level, averaged over the operating day or block, is above the maximum value established during the initial compliance demonstration.

(iii) A loss of all pilot flames for a flare during an operating day or block. Multiple losses of all pilot flames during an operating day constitutes one exceedance.

(iv) Each operating day or block for which the time interval between replacement of a nonregenerative carbon adsorber exceeds the interval established in paragraph (b)(1)(v) of this section.

(v) Each instance in which procedures to initiate the response to a bag leak detector alarm within 1 hour of the alarm as specified in the corrective action plan.

(7) *Excursions.* Excursions are defined by either of the two cases listed in paragraph (b)(7)(i) or (ii) of this section. An excursion also occurs if the periodic verification for a small control device is not conducted as specified in paragraph (b)(1)(i) of this section.

(i) When the period of control device operation is 4 hours or greater in an operating day or block and monitoring data are insufficient to constitute a valid hour of data, as defined in paragraph (b)(7)(iii) of this section, for at least 75 percent of the operating hours.

(ii) When the period of control device operation is less than 4 hours in an operating day or block and more than 1 of the hours during the period of operation does not constitute a valid hour of data due to insufficient monitoring data.

(iii) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (b)(7)(i) and (ii) of this section, if measured values are unavailable for any of the required 15-minute periods within the hour.

(8) *Violations.* Exceedances of parameters monitored according to the provisions of paragraphs (b)(1)(ii), (b)(1)(iv) through (ix), and (b)(5) of this section, or excursions as defined by paragraphs (b)(7)(i) and (ii) of this section, constitute violations of the operating limit according to paragraphs (b)(8)(i)

and (ii) of this section. Exceedances of the temperature limit monitored according to the provisions of paragraph (b)(1)(iii) of this section or exceedances of the outlet concentrations monitored according to the provisions of paragraph (b)(1)(x) of this section constitute violations of the emission limit according to paragraphs (b)(8)(i) and (ii) of this section. Exceedances of the outlet concentrations monitored according to the provisions of paragraph (b)(5) of this section constitute violations of the emission limit according to the provisions of paragraph (b)(8)(iii) of this section.

(i) For episodes occurring more than once per day, exceedances of established parameter limits or excursions will result in no more than one violation per operating day for each monitored item of equipment utilized in the process.

(ii) For control devices used for more than one process in the course of an operating day, exceedances or excursions will result in no more than one violation per operating day, per control device, for each process for which the control device is in service.

(iii) Exceedances of the 20 or 50 ppmv TOC outlet emission limit, averaged over the operating day, will result in no more than one violation per day per control device. Exceedances of the 20 or 50 ppmv HCl and chlorine outlet emission limit, averaged over the operating day, will result in no more than one violation per day per control device.

(c) *Monitoring for uncontrolled emission rates.* The owner or operator shall demonstrate continuous compliance with the emission limit in § 63.1362 (b)(2)(i) or (b)(4)(i) by calculating daily a 365-day rolling summation of uncontrolled emissions based on the uncontrolled emissions per emission episode, as calculated using the procedures in § 63.1365(c)(2), and records of the number of batches produced. Each day that the summation for a process exceeds 0.15 Mg/yr is considered a violation of the emission limit.

(d) *Monitoring for equipment leaks.* The standard for equipment leaks is based on monitoring. All monitoring requirements for equipment leaks are specified in § 63.1363.

(e) *Monitoring for heat exchanger systems.* The standard for heat exchanger systems is based on monitoring. All monitoring requirements for heat exchanger systems are specified in § 63.1362(f).

(f) *Monitoring for the pollution prevention alternative standard.* The owner or operator of an affected source that chooses to comply with the requirements of § 63.1362(g) (2) or (3) shall calculate annual rolling average values of the HAP and VOC factors in accordance with the procedures specified in paragraph (f)(1) of this section. If complying with § 63.1362(g)(3), the owner or operator shall also comply with the monitoring requirements specified in paragraph (b) of this section for the applicable add-on air pollution control device.

(1) *Annual factors.* The annual HAP and VOC factors shall be calculated in accordance with the procedures specified in paragraphs (f)(1) (i) through (iii) of this section.

(i) The consumption of both total HAP and total VOC shall be divided by the production rate, per process, for 12-month periods at the frequency specified in either paragraph (f)(1) (ii) or (iii) of this section, as applicable.

(ii) For continuous processes, the annual factors shall be calculated every 30 days for the 12-month period preceding the 30th day (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.

(iii) For batch processes, the annual factors shall be calculated every 10 batches for the 12-month period preceding the 10th batch (annual rolling average calculated every 10 batches). Additional annual factors shall be calculated every 12 months during the period before the 10th batch if more than 12 months elapse before the 10th batch is produced.

(2) *Violations.* Each rolling average that exceeds the target value established in § 63.1365(g)(3) is considered a violation of the emission limit.

(g) *Monitoring for emissions averaging.* The owner or operator of an affected source that chooses to comply with the requirements of § 63.1362(h) shall meet all monitoring requirements specified

in paragraph (b) of this section, as applicable, for all processes, storage tanks, and waste management units included in the emissions average.

(h) *Leak inspection provisions for vapor suppression equipment.* (1) Except as provided in paragraphs (h)(9) and (10) of this section, for each vapor collection system, closed-vent system, fixed roof, cover, or enclosure required to comply with this section, the owner or operator shall comply with the requirements of paragraphs (h)(2) through (8) of this section.

(2) Except as provided in paragraphs (h)(6) and (7) of this section, each vapor collection system and closed-vent system shall be inspected according to the procedures and schedule specified in paragraphs (h)(2)(i) and (ii) of this section and each fixed roof, cover, and enclosure shall be inspected according to the procedures and schedule specified in paragraph (h)(2)(iii) of this section.

(i) If the vapor collection system or closed-vent system is constructed of hard-piping, the owner or operator shall:

(A) Conduct an initial inspection according to the procedures in paragraph (h)(3) of this section, and

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

(ii) If the vapor collection system or closed-vent system is constructed of ductwork, the owner or operator shall:

(A) Conduct an initial inspection according to the procedures in paragraph (h)(3) of this section,

(B) Conduct annual inspections according to the procedures in paragraph (h)(3) of this section, and

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

(iii) For each fixed roof, cover, and enclosure, the owner or operator shall:

(A) Conduct an initial inspection according to the procedures in paragraph (h)(3) of this section, and

(B) Conduct semiannual visual inspections for visible, audible, or olfactory indications of leaks.

(3) Each vapor collection system, closed-vent system, fixed roof, cover, and enclosure shall be inspected according to the procedures specified in

paragraphs (h)(3)(i) through (vi) of this section.

(i) Inspections shall be conducted in accordance with Method 21 of 40 CFR part 60, appendix A.

(ii) *Detection instrument performance criteria.* (A) Except as provided in paragraph (h)(3)(ii)(B) of this section, the detection instrument shall meet the performance criteria of Method 21 of 40 CFR part 60, appendix A, except the instrument response factor criteria in section 3.1.2(a) of Method 21 shall be for the average composition of the process fluid not each individual VOC in the stream. For process streams that contain nitrogen, air, or other inerts which are not organic HAP or VOC, the average stream response factor shall be calculated on an inert-free basis.

(B) If no instrument is available at the plant site that will meet the performance criteria specified in paragraph (h)(3)(ii)(A) of this section, the instrument readings may be adjusted by multiplying by the average response factor of the process fluid, calculated on an inert-free basis as described in paragraph (h)(3)(ii)(A) of this section.

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

(iv) Calibration gases shall be as follows:

(A) Zero air (less than 10 parts per million hydrocarbon in air); and

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

(v) An owner or operator may elect to adjust or not adjust instrument readings for background. If an owner or operator elects to not adjust readings for background, all such instrument readings shall be compared directly to the applicable leak definition to determine whether there is a leak. If an owner or operator elects to adjust instrument readings for background, the

owner or operator shall measure background concentration using the procedures in § 63.180(b) and (c). The owner or operator shall subtract background reading from the maximum concentration indicated by the instrument.

(vi) The arithmetic difference between the maximum concentration indicated by the instrument and the background level shall be compared with 500 parts per million for determining compliance.

(4) Leaks, as indicated by an instrument reading greater than 500 parts per million above background or by visual inspections, shall be repaired as soon as practicable, except as provided in paragraph (h)(5) of this section.

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

(ii) Repair shall be completed no later than 15 calendar days after the leak is detected.

(5) Delay of repair of a vapor collection system, closed-vent system, fixed roof, cover, or enclosure for which leaks have been detected is allowed if the repair is technically infeasible without a shutdown, as defined in § 63.1361, or if the owner or operator determines that emissions resulting from immediate repair would be greater than the fugitive emissions likely to result from delay of repair. Repair of such equipment shall be complete by the end of the next shutdown.

(6) Any parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated, as described in § 63.1367(f)(1), as unsafe-to-inspect are exempt from the inspection requirements of paragraphs (h)(2)(i), (ii), and (iii) of this section if:

(i) The owner or operator determines that the equipment is unsafe-to-inspect because inspecting personnel would be exposed to an imminent or potential danger as a consequence of complying with paragraph (h)(2)(i), (ii), or (iii) of this section; and

(ii) The owner or operator has a written plan that requires inspection of the equipment as frequently as practicable during safe-to-inspect times. Inspection is not required more than once annually.

(7) Any parts of the vapor collection system, closed-vent system, fixed roof,

cover, or enclosure that are designated, as described in § 63.1367(f)(2), as difficult-to-inspect are exempt from the inspection requirements of paragraphs (h)(2)(i), (ii), and (iii)(A) of this section if:

(i) The owner or operator determines that the equipment cannot be inspected without elevating the inspecting personnel more than 2 meters above a support surface; and

(ii) The owner or operator has a written plan that requires inspection of the equipment at least once every 5 years.

(8) Records shall be maintained as specified in § 63.1367(f).

(9) If a closed-vent system subject to this section is also subject to the equipment leak provisions of § 63.1363, the owner or operator shall comply with the provisions of § 63.1363 and is exempt from the requirements of this section.

(10) For any closed-vent system that is operated and maintained under negative pressure, the owner or operator is not required to comply with the requirements specified in paragraphs (h)(2) through (8) of this section.

[64 FR 33589, June 23, 1999, as amended at 67 FR 59352, Sept. 20, 2002; 68 FR 37358, June 23, 2003; 71 FR 20460, Apr. 20, 2006; 79 FR 17374, Mar. 27, 2014]

§ 63.1367 Recordkeeping requirements.

(a) *Requirements of subpart A of this part.* The owner or operator of an affected source shall comply with the recordkeeping requirements in subpart A of this part as specified in Table 1 of this subpart and in paragraphs (a)(1) through (5) of this section.

(1) *Data retention.* Each owner or operator of an affected source shall keep copies of all records and reports required by this subpart for at least 5 years, as specified in § 63.10(b)(1) of subpart A of this part.

(2) *Records of applicability determinations.* The owner or operator of a stationary source that is not subject to this subpart shall keep a record of the applicability determination, as specified in § 63.10(b)(3) of subpart A of this part.

(3) *Records of malfunctions.* (i) In the event that an affected unit fails to meet an applicable standard, record the number of failures. For each failure

record the date, time, and duration of each failure.

(ii) For each failure to meet 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.

(iii) Record actions taken to minimize emissions in accordance with § 63.1360(e)(4), and any corrective actions taken to return the affected unit to its normal or usual manner of operation.

(4) *Recordkeeping requirements for sources with continuous monitoring systems.* The owner or operator of an affected source who installs a continuous monitoring system to comply with the alternative standards in § 63.1362(b)(6) or (c)(4) shall maintain records specified in § 63.10(c)(1) through (14) of subpart A of this part.

(5) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions regarding construction and reconstruction in § 63.5 of subpart A of this part.

(b) *Records of equipment operation.* The owner or operator must keep the records specified in paragraphs (b)(1) through (11) of this section up-to-date and readily accessible.

(1) Each measurement of a control device operating parameter monitored in accordance with § 63.1366 and each measurement of a treatment process parameter monitored in accordance with the provisions of § 63.1362(d).

(2) For processes subject to § 63.1362(g), records of consumption, production, and the rolling average values of the HAP and VOC factors.

(3) For each continuous monitoring system used to comply with the alternative standards in § 63.1362(b)(6) and (c)(4), records documenting the completion of calibration checks and maintenance of the continuous monitoring systems.

(4) For processes in compliance with the 0.15 Mg/yr emission limit of § 63.1362(b)(2)(i) or (b)(4)(i), daily records of the rolling annual calculations of uncontrolled emissions.

(5) For each bag leak detector used to monitor particulate HAP emissions

from a fabric filter, the owner or operator shall 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.

(6) The owner or operator of an affected source that complies with the standards for process vents, storage tanks, and wastewater systems shall maintain up-to-date, readily accessible records of the information specified in paragraphs (b)(6)(i) through (vii) of this section to document that HAP emissions or HAP loadings (for wastewater) are below the limits specified in § 63.1362:

(i) Except as specified in paragraph (b)(6)(ix) of this section, the initial calculations of uncontrolled and controlled emissions of gaseous organic HAP and HCl per batch for each process.

(ii) The wastewater concentrations and flow rates per POD and process.

(iii) The number of batches per year for each batch process.

(iv) The operating hours per year for continuous processes.

(v) The number of batches and the number of operating hours for processes that contain both batch and continuous operations.

(vi) The number of tank turnovers per year, if used in an emissions average or for determining applicability of a new PAI process unit.

(vii) A description of absolute or hypothetical peak-case operating conditions as determined using the procedures in § 63.1365(b)(11).

(viii) Periods of planned routine maintenance as described in § 63.1362(c)(5).

(ix) As an alternative to the records in paragraph (b)(6)(i) of this section, a record of the determination that the conditions in § 63.1365(b)(11)(iii)(D)(I) or (2) are met.

(7) Daily schedule or log of each operating scenario updated daily or, at a minimum, each time a different operating scenario is put into operation.

(8) If the owner or operator elects to comply with the vapor balancing alternative in § 63.1362(c)(6), the owner or operator must keep records of the DOT certification required by § 63.1362(c)(6)(ii) and the pressure relief

vent setting and leak detection records specified in § 63.1362(c)(6)(v).

(9) If the owner or operator elects to develop process unit groups, the owner or operator must keep records of the PAI and non-PAI process units in the process unit group, including records of the operating time for process units used to establish the process unit group. The owner or operator must also keep records of any redetermination of the primary product for the process unit group.

(10) All maintenance performed on the air pollution control equipment.

(11) If the owner or operator elects to comply with § 63.1362(c) by installing a floating roof, the owner or operator must keep records of each inspection and seal gap measurement in accordance with § 63.123(c) through (e) as applicable.

(c) *Records of equipment leak detection and repair.* The owner or operator of an affected source subject to the equipment leak standards in § 63.1363 shall implement the recordkeeping requirements specified in § 63.1363(g). All records shall be retained for a period of 5 years, in accordance with the requirements of § 63.10(b)(1) of subpart A of this part.

(d) *Records of emissions averaging.* The owner or operator of an affected source that chooses to comply with the requirements of § 63.1362(h) shall maintain up-to-date records of the following information:

(1) An Emissions Averaging Plan which shall include in the plan, for all emission points included in each of the emissions averages, the information listed in paragraphs (d)(1)(i) through (v) of this section.

(i) The identification of all emission points in each emissions average.

(ii) The values of all parameters needed for input to the emission debits and credits equations in § 63.1365(h).

(iii) The calculations used to obtain the debits and credits.

(iv) The estimated values for all parameters required to be monitored under § 63.1366(g) for each emission point included in an average. These parameter values, or as appropriate, limited ranges for parameter values, shall be specified as enforceable operating conditions for the operation of the

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process, storage vessel, or waste management unit, as appropriate. Changes to the parameters must be reported as required by § 63.1368(k).

(v) A statement that the compliance demonstration, monitoring, inspection, recordkeeping and reporting provisions in § 63.1365(h), § 63.1366(g), and § 63.1368(k) that are applicable to each emission point in the emissions average will be implemented beginning on the date of compliance.

(2) The Emissions Averaging Plan shall demonstrate that the emissions from the emission points proposed to be included in the average will not result in greater hazard or, at the option of the operating permit authority, greater risk to human health or the environment than if the emission points were controlled according to the provisions in § 63.1362(b) through (d).

(i) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the operating permit authority.

(A) The Administrator may require an owner or operator to use specific methodologies and procedures for making a hazard or risk determination.

(B) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Administrator makes available for use or any other technically sound information or methods.

(ii) An Emissions Averaging Plan that does not demonstrate hazard or risk equivalency to the satisfaction of the Administrator shall not be approved. The Administrator may require such adjustments to the Emissions Averaging Plan as are necessary in order to ensure that the average will not result in greater hazard or risk to human health or the environment than would result if the emission points were controlled according to § 63.1362(b) through (d).

(iii) A hazard or risk equivalency demonstration must satisfy the requirements specified in paragraphs (d)(2)(iii) (A) through (C) of this section.

(A) Be a quantitative, comparative chemical hazard or risk assessment;

(B) Account for differences between averaging and nonaveraging options in

chemical hazard or risk to human health or the environment; and

(C) Meet any requirements set by the Administrator for such demonstrations.

(3) Records as specified in paragraphs (a) and (b) of this section.

(4) A calculation of the debits and credits as specified in § 63.1365(h) for the last quarter and the prior four quarters.

(e) The owner or operator of an affected source subject to the requirements for heat exchanger systems in § 63.1362(g) shall retain the records as specified in § 63.104(f)(1)(i) through (iv).

(f) *Records of inspections.* The owner or operator shall keep records specified in paragraphs (f)(1) through (6) of this section.

(1) Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as unsafe to inspect in accordance with § 63.1366(h)(6), an explanation of why the equipment is unsafe-to-inspect, and the plan for inspecting the equipment.

(2) Records identifying all parts of the vapor collection system, closed-vent system, fixed roof, cover, or enclosure that are designated as difficult-to-inspect in accordance with § 63.1366(h)(7), an explanation of why the equipment is difficult-to-inspect, and the plan for inspecting the equipment.

(3) For each vapor collection system or closed-vent system that contains bypass lines that could divert a vent stream away from the control device and to the atmosphere, the owner or operator shall keep a record of the information specified in either paragraph (f)(3)(i) or (ii) of this section.

(i) Hourly records of whether the flow indicator specified under § 63.1362(j)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times and durations of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(ii) Where a seal mechanism is used to comply with § 63.1362(j)(2), hourly records of flow are not required. In such cases, the owner or operator shall

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record that the monthly visual inspection of the seals or closure mechanisms has been done and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line valve position has changed, or the key for a lock-and-key type lock has been checked out, and records of any car-seal that has broken.

(4) For each inspection conducted in accordance with § 63.1366(h)(2) and (3) during which a leak is detected, a record of the information specified in paragraphs (f)(4)(i) through (ix) of this section.

(i) Identification of the leaking equipment.

(ii) The instrument identification numbers and operator name or initials, if the leak was detected using the procedures described in § 63.1366(h)(3); or a record of that the leak was detected by sensory observations.

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

(iv) Maximum instrument reading measured by the method specified in § 63.1366(h)(4) after the leak is successfully repaired or determined to be non-repairable.

(v) "Repair delayed" and the reason for the delay if a leak is not repaired within 15 calendar days after discovery of the leak.

(vi) The name, initials, or other form of identification of the owner or operator (or designee) whose decision it was that repair could not be effected without a shutdown.

(vii) The expected date of successful repair of the leak if a leak is not repaired within 15 calendar days.

(viii) Dates of shutdowns that occur while the equipment is unrepaired.

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

(5) For each inspection conducted in accordance with § 63.1366(h)(3) during which no leaks are detected, a record that the inspection was performed, the date of the inspection, and a statement that no leaks were detected.

(6) For each visual inspection conducted in accordance with § 63.1366(h)(2)(i)(B) or (iii)(B) of this section during which no leaks are detected, a record that the inspection was performed, the date of the inspec-

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tion, and a statement that no leaks were detected.

(g) *Records of primary use.* For a PAI process unit that is used to produce a given material for use as a PAI as well as for other purposes, the owner or operator shall keep records of the total production and the production for use as a PAI on a semiannual or more frequent basis if the use as a PAI is not the primary use.

[64 FR 33589, June 23, 1999, as amended at 67 FR 59353, Sept. 20, 2002; 71 FR 20460, Apr. 20, 2006; 79 FR 17374, Mar. 27, 2014]

§ 63.1368 Reporting requirements.

(a) The owner or operator of an affected source shall comply with the reporting requirements of paragraphs (b) through (l) of this section. The owner or operator shall also comply with applicable paragraphs of §§ 63.9 and 63.10 of subpart A of this part, as specified in Table 1 of this subpart.

(b) *Initial notification.* The owner or operator shall submit the applicable initial notification in accordance with § 63.9(b) or (d) of subpart A of this part.

(c) *Application for approval of construction or reconstruction.* The owner or operator who is subject to § 63.5(b)(3) of subpart A of this part shall submit to the Administrator an application for approval of the construction of a new major source, the reconstruction of a major affected source, or the reconstruction of a major affected source subject to the standards. The application shall be prepared in accordance with § 63.5(d) of subpart A of this part.

(d) *Notification of continuous monitoring system performance evaluation.* An owner or operator who is required by the Administrator to conduct a performance evaluation for a continuous monitoring system that is used to comply with the alternative standard in § 63.1362(b)(6) or (c)(4) shall notify the Administrator of the date of the performance evaluation as specified in § 63.8(e)(2) of subpart A of this part.

(e) *Precompliance plan.* The Precompliance plan shall be submitted at least 3 months prior to the compliance date of the standard. For new sources, the Precompliance plan shall be submitted to the Administrator with the application for approval of construction or reconstruction. The

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Administrator shall have 90 days to approve or disapprove the Precompliance plan. The Precompliance plan shall be considered approved if the Administrator either approves it in writing, or fails to disapprove it in writing within the 90-day time period. The 90-day period shall begin when the Administrator receives the Precompliance plan. If the Precompliance plan is disapproved, the owner or operator must still be in compliance with the standard by the compliance date. To change any of the information submitted in the Precompliance plan or to submit a Precompliance plan for the first time after the compliance date, the owner or operator shall notify the Administrator at least 90 days before the planned change is to be implemented; the change shall be considered approved if the Administrator either approves the change in writing, or fails to disapprove the change in writing within 90 days of receipt of the change. The Precompliance plan shall include the information specified in paragraphs (e)(1) through (5) of this section.

(1) Requests for approval to use alternative monitoring parameters or requests to set monitoring parameters according to § 63.1366(b)(4).

(2) Descriptions of the daily or per batch demonstrations to verify that control devices subject to § 63.1366(b)(1)(i) are operating as designed.

(3) Data and rationale used to support the parametric monitoring level(s) that are set according to § 63.1366(b)(3)(ii)(B).

(4) For owners and operators complying with the requirements of § 63.1362(g), the pollution prevention demonstration summary required in § 63.1365(g)(1).

(5) Data and rationale used to support an engineering assessment to calculate uncontrolled emissions from process vents as required in § 63.1365(c)(2)(ii).

(6) 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 particulate

matter concentration exceeds the setpoint and activates the alarm.

(f) *Notification of compliance status report.* The Notification of Compliance Status report required under § 63.9(h) shall be submitted no later than 150 calendar days after the compliance date and shall include the information specified in paragraphs (f)(1) through (7) of this section.

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

(2) The results of emissions profiles, performance tests, engineering analyses, design evaluations, or calculations used to demonstrate compliance. For performance tests, results should include descriptions of sampling and analysis procedures and quality assurance procedures.

(3) Descriptions of monitoring devices, monitoring frequencies, and the values of monitored parameters established during the initial compliance determinations, including data and calculations to support the levels established.

(4) Operating scenarios.

(5) Descriptions of absolute or hypothetical peak-case operating and/or testing conditions for control devices.

(6) Identification of emission points subject to overlapping requirements described in § 63.1360(i) and the authority under which the owner or operator will comply, and identification of emission sources discharging to devices described by § 63.1362(l).

(7) Anticipated periods of planned routine maintenance during which the owner or operator would not be in compliance with the provisions in § 63.1362(c)(1) through (4).

(8) Percentage of total production from a PAI process unit that is anticipated to be produced for use as a PAI in the 3 years after either June 23, 1999 or startup, whichever is later.

(9) Records of the initial process units used to create each process unit group, if applicable.

(g) *Periodic reports.* The owner or operator shall prepare Periodic reports in accordance with paragraphs (g)(1) and (2) of this section and submit them to the Administrator.

(1) *Submittal schedule.* Except as provided in paragraphs (g)(1)(i) and (ii) of this section, the owner or operator shall submit Periodic reports semi-annually. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status report is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status report is due. Each subsequent Periodic report shall cover the 6-month period following the preceding period and shall be submitted no later than 60 days after the end of the applicable period.

(i) The Administrator may determine on a case-by-case basis that more frequent reporting is necessary to accurately assess the compliance status of the affected source.

(ii) Quarterly reports shall be submitted when the monitoring data are used to comply with the alternative standards in § 63.1362(b)(6) or (c)(4) and the source experiences excess emissions. Once an affected source reports excess emissions, the affected source shall follow a quarterly reporting format until a request to reduce reporting frequency is approved. If an owner or operator submits a request to reduce the frequency of reporting, the provisions in § 63.10(e)(3) (ii) and (iii) of subpart A of this part shall apply, except that the term “excess emissions and continuous monitoring system performance report and/or summary report” shall mean “Periodic report” for the purposes of this section.

(2) *Content of periodic report.* The owner or operator shall include the information in paragraphs (g)(2)(i) through (xii) of this section, as applicable.

(i) Each Periodic report must include the information in § 63.10(e)(3)(vi)(A) through (M) of subpart A of this part, as applicable.

(ii) If the total duration of excess emissions, parameter exceedances, or excursions for the reporting period is 1 percent or greater of the total operating time for the reporting period, or the total continuous monitoring system downtime for the reporting period is 5 percent or greater of the total operating time for the reporting period, the Periodic report must include the

information in paragraphs (g)(2)(ii)(A) through (D) of this section.

(A) Monitoring data, including 15-minute monitoring values as well as daily average values of monitored parameters, for all operating days when the average values were outside the ranges established in the Notification of Compliance Status report or operating permit.

(B) Duration of excursions, as defined in § 63.1366(b)(7).

(C) Operating logs and operating scenarios for all operating days when the values are outside the levels established in the Notification of Compliance Status report or operating permit.

(D) When a continuous monitoring system is used, the information required in § 63.10(c)(5) through (13) of subpart A of this part.

(iii) For each vapor collection system or closed vent system with a bypass line subject to § 63.1362(j)(1), records required under § 63.1366(f) of all periods when the vent stream is diverted from the control device through a bypass line. For each vapor collection system or closed vent system with a bypass line subject to § 63.1362(j)(2), records required under § 63.1366(f) of all periods in which the seal mechanism is broken, the bypass valve position has changed, or the key to unlock the bypass line valve was checked out.

(iv) The information in paragraphs (g)(2)(iv)(A) through (D) of this section shall be stated in the Periodic report, when applicable.

(A) No excess emissions.

(B) No exceedances of a parameter.

(C) No excursions.

(D) No continuous monitoring system has been inoperative, out of control, repaired, or adjusted.

(v) For each storage vessel subject to control requirements:

(A) Actual periods of planned routine maintenance during the reporting period in which the control device does not meet the specifications of § 63.1362(c)(5); and

(B) Anticipated periods of planned routine maintenance for the next reporting period.

(vi) For each PAI process unit that does not meet the definition of primary use, the percentage of the production

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in the reporting period produced for use as a PAI.

(viii) Updates to the corrective action plan.

(ix) Records of process units added to each process unit group, if applicable.

(x) Records of redetermination of the primary product for a process unit group.

(xi) For each inspection conducted in accordance with § 63.1366(h)(2) or (3) during which a leak is detected, the records specify in § 63.1367(h)(4) must be included in the next Periodic report.

(xii) If the owner or operator elects to comply with the provisions of § 63.1362(c) by installing a floating roof, the owner or operator shall submit the information specified in § 63.122(d) through (f) as applicable. References to § 63.152 in § 63.122 shall not apply for the purposes of this subpart.

(h) *Notification of process change.* (1) Except as specified in paragraph (h)(2) of this section, whenever a process change is made, or any of the information submitted in the Notification of Compliance Status report changes, the owner or operator shall submit the information specified in paragraphs (h)(1)(i) through (iv) of this section with the next Periodic report required under paragraph (g) of this section. For the purposes of this section, a process change means the startup of a new process, as defined in § 63.1361.

(i) A brief description of the process change;

(ii) A description of any modifications to standard procedures or quality assurance procedures;

(iii) Revisions to any of the information reported in the original Notification of Compliance Status report under paragraph (f) of this section; and

(iv) Information required by the Notification of Compliance Status report under paragraph (f) of this section for changes involving the addition of processes or equipment.

(2) The owner or operator must submit a report 60 days before the scheduled implementation date of either of the following:

(i) Any change in the activity covered by the Precompliance report.

(ii) A change in the status of a control device from small to large.

(i) *Reports of malfunctions.* If a source fails to meet an applicable standard, report such events in the Periodic Report. Report the number of failures to meet an applicable standard. For each instance, report the date, time, and duration of each failure. For each failure the report must include 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.

(j) *Reports of equipment leaks.* The owner or operator of an affected source subject to the standards in § 63.1363, shall implement the reporting requirements specified in § 63.1363(h). Copies of all reports shall be retained as records for a period of 5 years, in accordance with the requirements of § 63.10(b)(1) of subpart A of this part.

(k) *Reports of emissions averaging.* The owner or operator of an affected source that chooses to comply with the requirements of § 63.1362(h) shall submit all information as specified in § 63.1367(d) for all emission points included in the emissions average. The owner or operator shall also submit to the Administrator all information specified in paragraph (g) of this section for each emission point included in the emissions average.

(1) The reports shall also include the information listed in paragraphs (k)(1)(i) through (iv) of this section:

(i) Any changes to the processes, storage tanks, or waste management unit included in the average.

(ii) The calculation of the debits and credits for the reporting period.

(iii) Changes to the Emissions Averaging Plan which affect the calculation methodology of uncontrolled or controlled emissions or the hazard or risk equivalency determination.

(iv) Any changes to the parameters monitored according to § 63.1366(g).

(2) Every second semiannual or fourth quarterly report, as appropriate, shall include the results according to § 63.1367(d)(4) to demonstrate the emissions averaging provisions of §§ 63.1362(h), 63.1365(h), 63.1366(g), and 63.1367(d) are satisfied.

(l) *Reports of heat exchange systems.* The owner or operator of an affected source subject to the requirements for

heat exchange systems in § 63.1362(f) shall submit information about any delay of repairs as specified in § 63.104(f)(2) of subpart F of this part, except that when the phrase “periodic reports required by § 63.152(c) of subpart G of this part” is referred to in § 63.104(f)(2) of subpart F of this part, the periodic reports required in paragraph (g) of this section shall apply for the purposes of this subpart.

(m) *Notification of performance test and test Plan.* The owner or operator of an affected source shall notify the Administrator of the planned date of a performance test at least 60 days before the test in accordance with § 63.7(b) of subpart A of this part. The owner or operator also must submit the test Plan required by § 63.7(c) of subpart A of this part and the emission profile required by § 63.1365(b)(11)(iii) with the notification of the performance test.

(n) *Request for extension of compliance.* The owner or operator may submit to the Administrator a request for an extension of compliance in accordance with § 63.1364(a)(2).

(o) The owner or operator who submits an operating permit application before the date the Emissions Averaging Plan is due shall submit the information specified in paragraphs (o)(1) through (3) of this section with the operating permit application instead of the Emissions Averaging Plan.

(1) The information specified in § 63.1367(d) for emission points included in the emissions average;

(2) The information specified in § 63.9(h) of subpart A of this part, as applicable; and

(3) The information specified in paragraph (e) of this section, as applicable.

(p) *Electronic reporting.* Within 60 days after the date of completing each performance test (as defined in § 63.2), the owner or operator must submit the results of the performance tests, including any associated fuel analyses, required by this subpart according to the methods specified in paragraphs (p)(1) or (2) of this section.

(1) For data collected using test methods supported by the EPA-provided software, the owner or operator shall submit the results of the performance test to the EPA by direct computer-to-computer electronic transfer

via EPA-provided software, unless otherwise approved by the Administrator. Owners or operators, who claim that some of the information being submitted for performance tests is confidential business information (CBI), must submit a complete file using EPA-provided software that includes information claimed to be CBI on a compact disk, flash drive, or other commonly used electronic storage media to the EPA. The electronic media must be clearly marked as CBI and mailed to U.S. EPA/OAPQS/CORE CBI Office, Attention: WebFIRE Administrator, MD C404-02, 4930 Old Page Rd., Durham, NC 27703. The same file with the CBI omitted must be submitted to the EPA by direct computer-to-computer electronic transfer via EPA-provided software.

(2) For any performance test conducted using test methods that are not compatible with the EPA-provided software, the owner or operator shall submit the results of the performance test to the Administrator at the appropriate address listed in § 60.4.

[64 FR 33589, June 23, 1999, as amended at 66 FR 58396, Nov. 21, 2001; 67 FR 59354, Sept. 20, 2002; 79 FR 17375, Mar. 27, 2014]

§ 63.1369 Implementation and enforcement.

(a) This subpart can be implemented and enforced by the U.S. EPA, or a delegated authority such as the applicable State, local, or Tribal agency. If the U.S. EPA Administrator has delegated authority to a State, local, or Tribal agency, then that agency, in addition to the U.S. EPA, has the authority to implement and enforce this subpart. Contact the applicable U.S. EPA Regional Office to find out if implementation and enforcement of this subpart is delegated to a 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 paragraph (c) of this section are retained by the Administrator of U.S. EPA and cannot be transferred to the State, local, or Tribal agency.

(c) The authorities that cannot be delegated to State, local, or Tribal

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agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§ 63.1360 and 63.1362 through 63.1364. Where these standards reference another subpart, the cited provisions will be delegated according to the delegation provisions of the referenced subpart. Where these standards reference another subpart and modify the requirements, the requirements shall be modified as described in this subpart. Delegation of the modified requirements will also occur according to

the delegation provisions of the referenced subpart.

(2) Approval of major alternatives to test methods for under § 63.7(e)(2)(ii) and (f), as defined in § 63.90, and as required in this subpart.

(3) Approval of major alternatives to monitoring under § 63.8(f), as defined in § 63.90, and as required in this subpart.

(4) Approval of major alternatives to recordkeeping and reporting under § 63.10(f), as defined in § 63.90, and as required in this subpart.

[68 FR 37358, June 23, 2003]

TABLE 1 TO SUBPART MMM OF PART 63—GENERAL PROVISIONS APPLICABILITY TO SUBPART MMM

Reference to subpart A	Applies to subpart MMM	Explanation
§ 63.1(a)(1)	Yes	Additional terms are defined in § 63.1361.
§ 63.1(a)(2)–(3)	Yes	Subpart MMM (this table) specifies applicability of each paragraph in subpart A to subpart MMM.
§ 63.1(a)(4)	Yes	
§ 63.1(a)(5)	N/A	
§ 63.1(a)(6)–(7)	Yes	Discusses State programs.
§ 63.1(a)(8)	No	
§ 63.1(a)(9)	N/A	Reserved.
§ 63.1(a)(10)–(14)	Yes	§ 63.1360 specifies applicability.
§ 63.1(b)(1)	No	
§ 63.1(b)(2)–(3)	Yes	Subpart MMM (this table) specifies the applicability of each paragraph in subpart A to sources subject to subpart MMM.
§ 63.1(c)(1)	Yes	
§ 63.1(c)(2)	No	Area sources are not subject to subpart MMM.
§ 63.1(c)(3)	N/A	Reserved.
§ 63.1(c)(4)–(5)	Yes	Reserved.
§ 63.1(d)	N/A	
§ 63.1(e)	Yes	Additional terms are defined in § 63.1361; when overlap between subparts A and MMM occurs, subpart MMM takes precedence.
§ 63.2	Yes	
§ 63.3	Yes	Other units used in subpart MMM are defined in that subpart.
§ 63.4(a)(1)–(3)	Yes	Reserved.
§ 63.4(a)(4)	N/A	
§ 63.4(a)(5)–(c)	Yes	Except the term “affected source” shall apply instead of the terms “source” and “stationary source” in § 63.5(a)(1) of subpart A.
§ 63.5(a)	Yes	
§ 63.5(b)(1)	Yes	Reserved.
§ 63.5(b)(2)	N/A	
§ 63.5(b)(3)–(5)	Yes	§ 63.1360(g) specifies requirements for determining applicability of added PAI equipment.
§ 63.5(b)(6)	No	
§ 63.5(c)	N/A	Reserved.
§ 63.5(d)–(e)	Yes	Except “affected source” shall apply instead of “source” in § 63.5(f)(1) of subpart A.
§ 63.5(f)(1)	Yes	
§ 63.5(f)(2)	Yes	§ 63.1364 specifies compliance dates.
§ 63.6(a)	Yes	
§ 63.6(b)(1)–(2)	No	Reserved.
§ 63.6(b)(3)–(4)	Yes	
§ 63.6(b)(5)	Yes	Reserved.
§ 63.6(b)(6)	N/A	
§ 63.6(b)(7)	Yes	Except “affected source” shall apply instead of “source” in § 63.6(c)(1)–(2) of subpart A.
§ 63.6(c)(1)–(2)	Yes	
§ 63.6(c)(3)–(4)	N/A	Reserved.
§ 63.6(c)(5)	Yes	See § 63.1360(e)(4) for general duty requirement.
§ 63.6(d)	N/A	
§ 63.6(e)(1)(i)	No	See § 63.1360(e)(4) for general duty requirement.
§ 63.6(e)(1)(ii)	No	

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Reference to subpart A	Applies to subpart MMM	Explanation
§ 63.6(e)(1)(iii)	Yes	
§ 63.6(e)(3)	No	
§ 63.6(f)(1)	No	
§ 63.6(f)(2)–(3)	Yes	
§ 63.6(g)	Yes	An alternative standard has been proposed; however, affected sources will have the opportunity to demonstrate other alternatives to the Administrator.
§ 63.6(h)	No	Subpart MMM does not contain any opacity or visible emissions standards.
§ 63.6(i)(1)	Yes	
§ 63.6(i)(2)	Yes	Except “affected source” shall apply instead of “source” in § 63.6(i)(2)(i) and (ii) of subpart A.
§ 63.6(i)(3)–(14)	Yes	
§ 63.6(i)(15)	N/A	Reserved.
§ 63.6(i)(16)	Yes	
§ 63.6(j)	Yes	
§ 63.7(a)(1)	Yes	
§ 63.7(a)(2)(i)–(vi)	Yes	§ 63.1368 specifies that test results must be submitted in the Notification of Compliance Status due 150 days after the compliance date.
§ 63.7(a)(2)(vii)–(viii)	N/A	Reserved.
§ 63.7(a)(2)(ix)–(c)	Yes	
§ 63.7(d)	Yes	Except “affected source” shall apply instead of “source” in § 63.7(d) of subpart A.
§ 63.7(e)(1)	No	See § 63.1365(b).
§ 63.7(e)(2)	Yes	
§ 63.7(e)(3)	Yes	Except § 63.1365 specifies less than 3 runs for certain tests.
§ 63.7(e)(4)	Yes	
§ 63.7(f)	Yes	
§ 63.7(g)(1)	Yes	Except § 63.1368(a) specifies that the results of the performance test be submitted with the Notification of Compliance Status report
§ 63.7(g)(2)	N/A	Reserved.
§ 63.7(g)(3)	Yes	
§ 63.7(h)	Yes	
§ 63.8(a)(1)–(2)	Yes	
§ 63.8(a)(3)	N/A	Reserved.
§ 63.8(a)(4)	Yes	
§ 63.8(b)(1)	Yes	
§ 63.8(b)(2)	No	§ 63.1366 specifies CMS requirements.
§ 63.8(b)(3)	Yes	
§ 63.8(c)(1)(i)	No	
§ 63.8(c)(1)(ii)	Yes	
§ 63.8(c)(1)(iii)	No	
§ 63.8(c)(2)–(3)	Yes	
§ 63.8(c)(4)	No	§ 63.1366 specifies monitoring frequencies.
§ 63.8(c)(5)–(8)	No	
§ 63.8(d)–(f)(3)	Yes	Except the last sentence of § 63.8(d)(3), which shall be replaced with “The program of corrective action should be included in the plan required under § 63.8(d)(2).” for the purposes of this subpart.
§ 63.8(f)(4)	Yes	Except § 63.1368(b) specifies that requests may also be included in the Precompliance report.
§ 63.8(f)(5)	Yes	
§ 63.8(f)(6)	No	Subpart MMM does not require CEM’s.
§ 63.8(g)	No	§ 63.1366 specifies data reduction procedures.
§ 63.9(a)–(d)	Yes	
§ 63.9(e)	No	
§ 63.9(f)	No	Subpart MMM does not contain opacity and visible emission standards.
§ 63.9(g)	No	
§ 63.9(h)(1)	Yes	
§ 63.9(h)(2)(i)	Yes	Except § 63.1368(a)(1) specifies additional information to include in the Notification of Compliance Status report.
§ 63.9(h)(2)(ii)	No	§ 63.1368 specifies the Notification of Compliance Status report is to be submitted within 150 days after the compliance date.
§ 63.9(h)(3)	Yes	
§ 63.9(h)(4)	N/A	Reserved.
§ 63.9(h)(5)–(6)	Yes	
63.9(i)	Yes	
63.9(j)	No	§ 63.1368(h) specifies procedures for notification of changes.
§ 63.10(a)–(b)(1)	Yes	
§ 63.10(b)(2)	No	§ 63.1367 specifies recordkeeping requirements.
§ 63.10(b)(3)	Yes	
§ 63.10(c)(1)–(14)	Yes	
§ 63.10(c)(15)	No	
§ 63.10(d)(1)	Yes	
§ 63.10(d)(2)	Yes	
§ 63.10(d)(3)	No	Subpart MMM does not include opacity and visible emission standards.

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Reference to subpart A	Applies to subpart MMM	Explanation
§ 63.10(d)(4)	Yes	
§ 63.10(d)(5)	No	See § 63.1368(i) for malfunction reporting requirements.
§ 63.10(e)(1)–(2)(i)	Yes	
§ 63.10(e)(2)(ii)	No	Subpart MMM does not include opacity monitoring requirements.
§ 63.10(e)(3)	Yes	
§ 63.10(e)(4)	No	Subpart MMM does not include opacity monitoring requirements.
§ 63.10(f)	Yes	
§ 63.11–§ 63.15	Yes.	

[64 FR 33589, June 23, 1999, as amended at 67 FR 59355, Sept. 20, 2002; 79 FR 17375, Mar. 27, 2014]

TABLE 2 TO SUBPART MMM OF PART 63—STANDARDS FOR NEW AND EXISTING PAI SOURCES

Emission source	Applicability	Requirement
Process vents	Existing: Processes having uncontrolled organic HAP emissions ≥ 0.15 Mg/yr. Processes having uncontrolled HCl and chlorine emissions ≥ 6.8 Mg/yr. Individual process vents meeting flow and mass emissions criteria that have gaseous organic HAP emissions controlled to less than 90% on or after November 10, 1997. New: Processes having uncontrolled organic HAP emissions ≥ 0.15 Mg/yr. Processes having uncontrolled HCl and chlorine emissions ≥ 6.8 Mg/yr and < 191 Mg/yr. Processes having uncontrolled HCl and chlorine emissions ≥ 191 Mg/yr.	90% for organic HAP per process or to outlet concentration of ≤ 20 ppmv TOC. 94% for HCl and chlorine per process or to outlet HCl and chlorine concentration of ≤ 20 ppmv. 98% gaseous organic HAP control per vent or ≤ 20 ppmv TOC outlet limit. 98% for organic HAP per process or ≤ 20 ppmv TOC. 94% for HCl and chlorine per process or to outlet concentration of ≤ 20 ppmv HCl and chlorine. 99% for HCl and chlorine per process or to outlet concentration of ≤ 20 ppmv HCl and chlorine.
Storage vessels	Existing: ≥ 75 m ³ capacity and vapor pressure ≥ 3.45 kPa. New: ≥ 38 m ³ capacity and vapor pressure ≥ 16.5 kPa. ≥ 75 m ³ capacity and vapor pressure ≥ 3.45 kPa	Install a floating roof, reduce HAP by 95% per vessel, or to outlet concentration of ≤ 20 ppmv TOC. Same as for existing sources. Same as for existing sources.
Wastewater ^a	Existing: Process wastewater with $\geq 10,000$ ppmw Table 9 compounds at any flowrate or $\geq 1,000$ ppmw Table 9 compounds at ≥ 10 L/min, and maintenance wastewater with HAP load ≥ 5.3 Mg per discharge event. New: Same criteria as for existing sources	Reduce concentration of total Table 9 compounds to < 50 ppmw (or other options). Reduce concentration of total Table 9 compounds to < 50 ppmw (or other options). 99% reduction of Table 9 compounds from all streams.
Equipment leaks	Subpart H	Subpart H with minor changes, including monitoring frequencies consistent with the proposed CAR.
Product dryers and bag dumps.	Dryers used to dry PAI that is also a HAP, and bag dumps used to introduce feedstock that is a solid and a HAP.	Particulate matter concentration not to exceed 0.01 gr/dscf.
Heat exchange systems	Each heat exchange system used to cool process equipment in PAI manufacturing operations.	Monitoring and leak repair program as in HON.

^a Table 9 is listed in the appendix to subpart G of 40 CFR part 63.

TABLE 3 TO SUBPART MMM OF PART 63—MONITORING REQUIREMENTS FOR CONTROL DEVICES ^A

Control device	Monitoring equipment required	Parameters to be monitored	Frequency
All control devices	1. Flow indicator installed at all bypass lines to the atmosphere and equipped with continuous recorder or. 2. Valves sealed closed with car-seal or lock-and-key configuration.	1. Presence of flow diverted from the control device to the atmosphere or. 2. Monthly inspections of sealed valves.	Hourly records of whether the flow indicator was operating and whether a diversion was detected at any time during each hour. Monthly.
Scrubber	Liquid flow rate or pressure drop mounting device. Also a pH monitor if the scrubber is used to control acid emissions..	1. Liquid flow rate into or out of the scrubber or the pressure drop across the scrubber.. 2. pH of effluent scrubber liquid.	1. Every 15 minutes. 2. Once a day.
Thermal incinerator	Temperature monitoring device installed in firebox or in ductwork immediately downstream of firebox ^b .	Firebox temperature	Every 15 minutes.
Catalytic incinerator	Temperature monitoring device installed in gas stream immediately before and after catalyst bed.	Temperature difference across catalyst bed.	Every 15 minutes.
Flare	Heat sensing device installed at the pilot light.	Presence of a flame at the pilot light.	Every 15 minutes.
Boiler or process heater <44 megawatts and vent stream is not mixed with the primary fuel.	Temperature monitoring device installed in firebox ^b .	Combustion temperature	Every 15 minutes.
Condenser	Temperature monitoring device installed at condenser exit.	Condenser exit (product side) temperature.	Every 15 minutes.
Carbon adsorber (nonregenerative).	None	Operating time since last replacement.	N/A.
Carbon adsorber (regenerative).	Stream flow monitoring device, and. Carbon bed temperature monitoring device.	1. Total regeneration stream mass or volumetric flow during carbon bed regeneration cycle(s). 2. Temperature of carbon bed after regeneration. 3. Temperature of carbon bed within 15 minutes of completing any cooling cycle(s). 4. Operating time since end of last regeneration. 5. Check for bed poisoning	1. For each regeneration cycle, record the total regeneration stream mass or volumetric flow. 2. For each regeneration cycle, record the maximum carbon bed-temperature. 3. Within 15 minutes of completing any cooling cycle, record the carbon bed temperature. 4. Operating time to be based on worst-case conditions. 5. Yearly.

^aAs an alternative to the monitoring requirements specified in this table, the owner or operator may use a CEM meeting the requirements of Performance Specifications 8 or 9 of appendix B of part 60 to monitor TOC every 15 minutes.

^bMonitor may be installed in the firebox or in the ductwork immediately downstream of the firebox before any substantial heat exchange is encountered.

TABLE 4 TO SUBPART MMM OF PART 63—CONTROL REQUIREMENTS FOR ITEMS OF EQUIPMENT THAT MEET THE CRITERIA OF § 63.1362(k)

Item of equipment	Control requirement ^a
1. Drain or drain hub	(a) Tightly fitting solid cover (TFSC); or (b) TFSC with a vent to either a process, or to a control device meeting the requirements of § 63.139(c); or (c) Water seal with submerged discharge or barrier to protect discharge from wind.
2. Manhole ^b	(a) TFSC; or (b) TFSC with a vent to either a process or to a control device meeting the requirements of § 63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.

Item of equipment	Control requirement ^a
3. Lift station	(a) TFSC; or (b) TFSC with a vent to either a process, or to a control device meeting the requirements of § 63.139(c); or (c) If the lift station is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter. The lift station shall be level controlled to minimize changes in the liquid level.
4. Trench	(a) TFSC; or (b) TFSC with a vent to either a process, or to a control device meeting the requirements of § 63.139(c); or (c) If the item is vented to the atmosphere, use a TFSC with a properly operating water seal at the entrance or exit to the item to restrict ventilation in the collection system. The vent pipe shall be at least 90 cm in length and not exceeding 10.2 cm in nominal inside diameter.
5. Pipe	Each pipe shall have no visible gaps in joints, seals, or other emission interfaces.
6. Oil/water separator	(a) Equip with a fixed roof and route vapors to a process, or equip with a closed-vent system that routes vapors to a control device meeting the requirements of § 63.139(c); or (b) Equip with a floating roof that meets the equipment specifications of § 60.693 (a)(1)(i), (a)(1)(ii), (a)(2), (a)(3), and (a)(4).
7. Tank	Maintain a fixed roof and consider vents as process vents. ^c

^a Where a tightly fitting solid cover is required, it shall be maintained with no visible gaps or openings, except during periods of sampling, inspection, or maintenance.
^b Manhole includes sumps and other points of access to a conveyance system.
^c A fixed roof may have openings necessary for proper venting of the tank, such as pressure/vacuum vent, j-pipe vent.

[67 FR 59355, Sept. 20, 2002]

Subpart NNN—National Emission Standards for Hazardous Air Pollutants for Wool Fiberglass Manufacturing

SOURCE: 64 FR 31709, June 14, 1999, unless otherwise noted.

§ 63.1380 Applicability.

(a) Except as provided in paragraphs (b) and (c) of this section, the requirements of this subpart apply to the owner or operator of each wool fiberglass manufacturing facility that is a major source or is located at a facility that is a major source.

(b) The requirements of this subpart apply to emissions of hazardous air pollutants (HAPs), as measured according to the methods and procedures in this subpart, emitted from the following new and existing sources at a wool fiberglass manufacturing facility subject to this subpart:

- (1) Each new and existing glass-melting furnace located at a wool fiberglass manufacturing facility;
- (2) Each new and existing rotary spin wool fiberglass manufacturing line producing a bonded wool fiberglass building insulation product; and

(3) Each new and existing flame attenuation wool fiberglass manufacturing line producing a bonded pipe product and each new flame attenuation wool fiberglass manufacturing line producing a bonded heavy-density product.

(c) The requirements of this subpart do not apply to a wool fiberglass manufacturing facility that the owner or operator demonstrates to the Administrator is not a major source as defined in § 63.2.

(d) The provisions of this part 63, subpart A that apply and those that do not apply to this subpart are specified in Table 1 of this subpart.

§ 63.1381 Definitions.

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

Bag leak detection system means systems that include, but are not limited to, devices using triboelectric, light scattering, and other effects to monitor relative or absolute particulate matter (PM) emissions.

Bonded means wool fiberglass to which a phenol-formaldehyde binder has been applied.

Building insulation means bonded wool fiberglass insulation, having a