

Environmental Protection Agency

§ 63.480

Reference	Applies to subpart T		Comments
	BCC	BVI	
63.15(a)-(b) .....	Yes .....	Yes.	

BCC = Batch Cold Cleaning Machines.  
BVI = Batch Vapor and In-line Cleaning Machines.

[59 FR 61818, Dec. 2, 1994; 60 FR 29485, June 5, 1995, as amended at 70 FR 75346, Dec. 19, 2005]

**Subpart U—National Emission Standards for Hazardous Air Pollutant Emissions: Group I Polymers and Resins**

SOURCE: 62 FR 46925, Sept. 5, 1996, unless otherwise noted.

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

(a) *Definition of affected source.* The provisions of this subpart apply to each affected source. Affected sources are described in paragraphs (a)(1) through (a)(4) of this section.

(1) An affected source is either an existing affected source or a new affected source. Existing affected source is defined in paragraph (a)(2) of this section, and new affected source is defined in paragraph (a)(3) of this section.

(2) An existing affected source is defined as each group of one or more elastomer product process units (EPPU) and associated equipment, as listed in paragraph (a)(4) of this section, that is not part of a new affected source, as defined in paragraph (a)(3) of this section, that is manufacturing the same primary product and that is located at a plant site that is a major source.

(3) A new affected source is defined by the criteria in paragraph (a)(3)(i), (a)(3)(ii), or (a)(3)(iii) of this section. The situation described in paragraph (a)(3)(i) of this section is distinct from those situations described in paragraphs (a)(3)(ii) and (a)(3)(iii) of this section and from any situation described in paragraph (1) of this section.

(i) At a site without HAP emission points before June 12, 1995 (i.e., a "greenfield" site), each group of one or more EPPU and associated equipment, as listed in paragraph (a)(4) of this section, that is manufacturing the same primary product and that is part of a major source on which construction commenced after June 12, 1995;

(ii) A group of one or more EPPU meeting the criteria in paragraph (1)(1)(1) of this section; or

(iii) A reconstructed affected source meeting the criteria in paragraph (1)(2)(1) of this section.

(4) *Emission points and equipment.* The affected source also includes the emission points and equipment specified in paragraphs (a)(4)(i) through (a)(4)(iv) of this section that are associated with each applicable group of one or more EPPU constituting an affected source.

(i) Each waste management unit.

(ii) Maintenance wastewater.

(iii) Each heat exchange system.

(iv) Equipment required by, or utilized as a method of compliance with, this subpart which may include control devices and recovery devices.

(5) EPPUs and associated equipment, as listed in paragraph (a)(4) of this section, that are located at plant sites that are not major sources are neither affected sources nor part of an affected source.

(b) *EPPUs without organic HAP.* The owner or operator of an EPPU that is part of an affected source, as defined in paragraph (a) of this section, but that does not use or manufacture any organic HAP shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section. Such an EPPU is not subject to any other provision of this subpart and is not required to comply with the provisions of subpart A of this part.

(1) Retain information, data, and analyses used to document the basis for the determination that the EPPU does not use or manufacture any organic HAP. Types of information that could document this determination include, but are not limited to, records of chemicals purchased for the process, analyses of process stream composition, engineering calculations, or process knowledge.

(2) When requested by the Administrator, demonstrate that the EPPU does not use or manufacture any organic HAP.

(c) *Emission points not subject to the provisions of this subpart.* The affected source includes the emission points listed in paragraphs (c)(1) through (c)(9) of this section, but these emission points are not subject to the requirements of this subpart or to the provisions of subpart A of this part.

(1) Equipment that does not contain organic HAP and is located at an EPPU that is part of an affected source:

(2) Stormwater from segregated sewers;

(3) Water from fire-fighting and deluge systems in segregated sewers;

(4) Spills;

(5) Water from safety showers;

(6) Water from testing of deluge systems;

(7) Water from testing of firefighting systems;

(8) Vessels and equipment storing and/or handling material that contains no organic HAP or organic HAP as impurities only; and

(9) Equipment that is intended to operate in organic HAP service for less than 300 hours during the calendar year.

(d) *Processes exempted from the affected source.* Research and development facilities are exempted from the affected source.

(e) *Applicability determination of elastomer equipment included in a process unit producing a non-elastomer product.* If an elastomer product that is subject to this subpart is produced within a process unit that is subject to subpart JJJ of this part, and at least 50 percent of the elastomer is used in the production of the product manufactured by the subpart JJJ process unit, the unit operations involved in the production of the elastomer are considered part of the process unit that is subject to subpart JJJ, and not this subpart.

(f) *Primary product determination and applicability.* An owner or operator of a process unit that produces or plans to produce an elastomer product shall determine if the process unit is subject to this subpart in accordance with this paragraph. The owner or operator shall initially determine whether a process

unit is designated as an EPPU and subject to the provisions of this subpart in accordance with either paragraph (f)(1) or (f)(2) of this section. The owner or operator of a flexible operation unit that was not initially designated as an EPPU, but in which an elastomer product is produced, shall conduct an annual re-determination of the applicability of this subpart in accordance with paragraph (f)(3) of this section. Owners or operators that anticipate the production of an elastomer product in a process unit that was not initially designated as an EPPU, and in which no elastomer products are currently produced, shall determine if the process unit is subject to this subpart in accordance with paragraph (f)(4) of this section. Paragraphs (f)(3) and (f)(5) through (f)(7) of this section discuss compliance only for flexible operation units. Other paragraphs apply to all process units, including flexible operation units, unless otherwise noted. Paragraph (f)(8) of this section contains reporting requirements associated with the applicability determinations. Paragraphs (f)(9) and (f)(10) describe criteria for removing the EPPU designation from a process unit.

(1) *Initial determination.* The owner or operator shall initially determine if a process unit is subject to the provisions of this subpart based on the primary product of the process unit in accordance with paragraphs (f)(1)(i) through (iii) of this section. If the process unit never uses or manufactures any organic HAP, regardless of the outcome of the primary product determination, the only requirements of this subpart that might apply to the process unit are contained in paragraph (b) of this section. If a flexible operation unit does not use or manufacture any organic HAP during the manufacture of one or more products, paragraph (f)(5)(i) of this section applies to that flexible operation unit.

(i) If a process unit only manufactures one product, then that product shall represent the primary product of the process unit.

(ii) If a process unit produces more than one intended product at the same time, the primary product shall be determined in accordance with paragraph (f)(1)(ii)(A) or (B) of this section.

(A) The product for which the process unit has the greatest annual design capacity on a mass basis shall represent the primary product of the process unit, or

(B) If a process unit has the same maximum annual design capacity on a mass basis for two or more products, and if one of those products is an elastomer product, then the elastomer product shall represent the primary product of the process unit.

(iii) If a process unit is designed and operated as a flexible operation unit, the primary product shall be determined as specified in paragraphs (f)(1)(iii)(A) or (B) of this section based on the anticipated operations for the 5 years following September 5, 1996 at existing process units, or for the first year after the process unit begins production of any product for new process units. If operations cannot be anticipated sufficiently to allow the determination of the primary product for the specified period, applicability shall be determined in accordance with paragraph (f)(2) of this section.

(A) If the flexible operation unit will manufacture one product for the greatest operating time over the specified five year period for existing process units, or the specified one year period for new process units, then that product shall represent the primary product of the flexible operation unit.

(B) If the flexible operation unit will manufacture multiple products equally based on operating time, then the product with the greatest expected production on a mass basis over the specified five year period for existing process units, or the specified one year period for new process units shall represent the primary product of the flexible operation unit.

(iv) If, according to paragraph (f)(1)(i), (ii), or (iii) of this section, the primary product of a process unit is an elastomer product, then that process unit shall be designated as an EPPU. That EPPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source, or part of an affected source comprised of other EPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same

plant site that is a major source. If the primary product of a process unit is determined to be a product that is not an elastomer product, then that process unit is not an EPPU.

(2) If the primary product cannot be determined for a flexible operation unit in accordance with paragraph (f)(1)(iii) of this section, applicability shall be determined in accordance with this paragraph.

(i) If the owner or operator cannot determine the primary product in accordance with paragraph (f)(1)(iii) of this section, but can determine that an elastomer product is not the primary product, then that flexible operation unit is not an EPPU.

(ii) If the owner or operator cannot determine the primary product in accordance with paragraph (f)(1)(iii) of this section, and cannot determine that an elastomer product is not the primary product as specified in paragraph (f)(2)(i) of this section, applicability shall be determined in accordance with paragraph (f)(2)(i)(A) or (f)(2)(i)(B) of this section.

(A) If the flexible operation unit is an existing process unit, the flexible operation unit shall be designated as an EPPU if an elastomer product was produced for 5 percent or greater of the total operating time of the flexible operation unit since March 9, 1999. That EPPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source, or part of an affected source comprised of other EPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same plant site that is a major source. For a flexible operation unit that is designated as an EPPU in accordance with this paragraph, the elastomer product produced for the greatest amount of time since March 9, 1999 shall be designated as the primary product of the EPPU.

(B) If the flexible operation unit is a new process unit, the flexible operation unit shall be designated as an EPPU if the owner or operator anticipates that an elastomer product will be manufactured in the flexible operation unit at any time in the first year after the date the unit begins production of any

product. That EPPU and associated equipment, as listed in paragraph (a)(4) of this section, is either an affected source, or part of an affected source comprised of other EPPU and associated equipment, as listed in paragraph (a)(4) of this section, subject to this subpart with the same primary product at the same plant site that is a major source. For a process unit that is designated as an EPPU in accordance with this paragraph, the elastomer product that will be produced shall be designated as the primary product of the EPPU. If more than one elastomer product will be produced, the owner or operator may select which elastomer product is designated as the primary product.

(3) *Annual applicability determination for non-EPPUs that have produced an elastomer product.* Once per year beginning September 5, 2001, the owner or operator of each flexible operation unit that is not designated as an EPPU, but that has produced an elastomer product at any time in the preceding five-year period or since the date that the unit began production of any product, whichever is shorter, shall perform the evaluation described in paragraphs (f)(3)(i) through (f)(3)(iii) of this section. However, an owner or operator that does not intend to produce any elastomer product in the future, in accordance with paragraph (f)(9) of this section, is not required to perform the evaluation described in paragraphs (f)(3)(i) through (f)(3)(iii) of this section.

(i) For each product produced in the flexible operation unit, the owner or operator shall calculate the percentage of total operating time over which the product was produced during the preceding five-year period.

(ii) The owner or operator shall identify the primary product as the product with the highest percentage of total operating time for the preceding five-year period.

(iii) If the primary product identified in paragraph (f)(3)(ii) is an elastomer product, the flexible operation unit shall be designated as an EPPU. The owner or operator shall notify the Administrator no later than 45 days after determining that the flexible operation unit is an EPPU, and shall comply with

the requirements of this subpart in accordance with paragraph (i)(1) of this section for the flexible operation unit.

(4) *Applicability determination for non-EPPUs that have not produced an elastomer product.* The owner or operator that anticipates the production of an elastomer product in a process unit that is not designated as an EPPU, and in which no elastomer products have been produced in the previous 5 year period or since the date that the process unit began production of any product, whichever is shorter, shall determine if the process unit is subject to this subpart in accordance with paragraphs (f)(4)(i) and (ii) of this section. Also, owners or operators who have notified the Administrator that a process unit is not an EPPU in accordance with paragraph (f)(9) of this section, that now anticipate the production of an elastomer product in the process unit, shall determine if the process unit is subject to this subpart in accordance with paragraphs (f)(4)(i) and (ii) of this section.

(i) The owner or operator shall use the procedures in paragraph (f)(1) or (f)(2) of this section to determine if the process unit is designated as an EPPU, with the following exception: for existing process units that are determining the primary product in accordance with paragraph (f)(1)(iii) of this section, production shall be projected for the five years following the date that the owner or operator anticipates initiating the production of an elastomer product.

(ii) If the unit is designated as an EPPU in accordance with paragraph (f)(4)(i) of this section, the owner or operator shall comply in accordance with paragraph (i)(1) of this section.

(5) *Compliance for flexible operation units.* Owners or operators of EPPUs that are flexible operation units shall comply with the standards specified for the primary product, with the exceptions provided in paragraphs (f)(5)(i) and (f)(5)(ii) of this section.

(i) Whenever a flexible operation unit manufactures a product in which no organic HAP is used or manufactured, the owner or operator is only required to comply with either paragraph (b)(1) or (b)(2) of this section to demonstrate compliance for activities associated

with the manufacture of that product. This subpart does not require compliance with the provisions of subpart A of this part for activities associated with the manufacture of a product that meets the criteria of paragraph (b) of this section.

(ii) Whenever a flexible operation unit manufactures a product that makes it subject to subpart GGG of this part, the owner or operator is not required to comply with the provisions of this subpart during the production of that product.

(6) Owners or operators of EPPUs that are flexible operation units have the option of determining the group status of each emission point associated with the flexible operation unit, in accordance with either paragraph (f)(6)(i) or (f)(6)(ii) of this section, with the exception of batch front-end process vents. For batch front-end process vents, the owner or operator shall determine the group status in accordance with § 63.488.

(1) The owner or operator may determine the group status of each emission point based on emission point characteristics when the primary product is being manufactured.

(ii) The owner or operator may determine the group status of each emission point separately for each product produced by the flexible operation unit. For each product, the group status shall be determined using the emission point characteristics when that product is being manufactured and using the Group 1 criteria specified for the primary product. (Note: Under this scenario, it is possible that the group status, and therefore the requirement to achieve emission reductions, for an emission point may change depending on the product being manufactured.)

(7) Owners or operators determining the group status of emission points in flexible operation units based solely on the primary product in accordance with paragraph (f)(6)(i) of this section shall establish parameter monitoring levels, as required, in accordance with either paragraph (f)(7)(i) or (f)(7)(ii) of this section. Owners or operators determining the group status of emission points in flexible operation units based on each product in accordance with paragraph (f)(6)(ii) of this section shall

establish parameter monitoring levels, as required, in accordance with paragraph (f)(7)(i) of this section.

(i) Establish separate parameter monitoring levels in accordance with § 63.505(a) for each individual product.

(ii) Establish a single parameter monitoring level (for each parameter required to be monitored at each device subject to monitoring requirements) in accordance with § 63.505(a) that would apply for all products.

(8) *Reporting requirements.* When it is determined that a process unit is an EPPU and subject to the requirements of this subpart, the Notification of Compliance Status required by § 63.506(e)(6) shall include the information specified in paragraphs (f)(8)(i) and (f)(8)(ii) of this section, as applicable. If it is determined that the process unit is not subject to this subpart, the owner or operator shall either retain all information, data, and analysis used to document the basis for the determination that the primary product is not an elastomer product, or, when requested by the Administrator, demonstrate that the process unit is not subject to this subpart.

(i) If the EPPU manufactures only one elastomer product, identification of that elastomer product.

(ii) If the EPPU is designed and operated as a flexible operation unit, the information specified in paragraphs (f)(8)(ii)(A) through (f)(8)(ii)(D) of this section, as appropriate, shall be submitted.

(A) If a primary product could be determined, identification of the primary product.

(B) Identification of which compliance option, either paragraph (f)(6)(i) or (f)(6)(ii) of this section, has been selected by the owner or operator.

(C) If the option to establish separate parameter monitoring levels for each product in paragraph (f)(7)(i) of this section is selected, the identification of each product and the corresponding parameter monitoring level.

(D) If the option to establish a single parameter monitor level in paragraph (f)(7)(ii) of this section is selected, the parameter monitoring level for each parameter.

(9) *EPPUs terminating production of all elastomer products.* If an EPPU terminates the production of all elastomer products and does not anticipate the production of any elastomer products in the future, the process unit is no longer an EPPU and is not subject to this subpart after notification is made to the Administrator. This notification shall be accompanied by a rationale for why it is anticipated that no elastomer products will be produced in the process unit in the future.

(10) *Redetermination of applicability to EPPUs that are flexible operation units.* Whenever changes in production occur that could reasonably be expected to change the primary product of an EPPU that is operating as a flexible operation unit from an elastomer product to a product that would make the process unit subject to another subpart of this part, the owner or operator shall re-evaluate the status of the process unit as an EPPU in accordance with paragraphs (f)(10)(i) through (iii) of this section.

(i) For each product produced in the flexible operation unit, the owner or operator shall calculate the percentage of total operating time in which the product was produced for the preceding five-year period, or since the date that the process unit began production of any product, whichever is shorter.

(ii) The owner or operator shall identify the primary product as the product with the highest percentage of total operating time for the period.

(iii) If the conditions in (f)(10)(iii)(A) through (C) of this section are met, the flexible operation unit shall no longer be designated as an EPPU after the compliance date of the other subpart and shall no longer be subject to the provisions of this subpart after the date that the process unit is required to be in compliance with the provisions of the other subpart of this part to which it is subject. If the conditions in paragraphs (f)(10)(iii)(A) through (C) of this section are not met, the flexible operation unit shall continue to be considered an EPPU and subject to the requirements of this subpart.

(A) The product identified in (f)(10)(ii) of this section is not an elastomer product; and

(B) The production of the product identified in (f)(10)(ii) of this section is subject to another subpart of this part; and

(C) The owner or operator submits a notification to the Administrator of the pending change in applicability.

(g) *Storage vessel ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (g)(1) through (g)(7) of this section to determine to which process unit a storage vessel shall be assigned. Paragraph (g)(8) of this section specifies when an owner or operator is required to re-determine to which process unit a storage vessel is assigned.

(1) If a storage vessel is already subject to another subpart of 40 CFR part 63 on September 5, 1996, that storage vessel shall be assigned to the process unit subject to the other subpart.

(2) If a storage vessel is dedicated to a single process unit, the storage vessel shall be assigned to that process unit.

(3) If a storage vessel is shared among process units, then the storage vessel shall be assigned to that process unit located on the same plant site as the storage vessel that has the greatest input into or output from the storage vessel (i.e., the process unit that has the predominant use of the storage vessel.)

(4) If predominant use cannot be determined for a storage vessel that is shared among process units and if only one of those process units is an EPPU subject to this subpart, the storage vessel shall be assigned to that EPPU.

(5) If predominant use cannot be determined for a storage vessel that is shared among process units and if more than one of the process units are EPPUs that have different primary products and that are subject to this subpart, then the owner or operator shall assign the storage vessel to any one of the EPPUs sharing the storage vessel.

(6) If the predominant use of a storage vessel varies from year to year, then predominant use shall be determined based on the utilization that occurred during the year preceding September 5, 1996 or based on the expected utilization for the 5 years following September 5, 1996, whichever is more

representative of the expected operations for that storage vessel for existing affected sources, and based on the expected utilization for the first 5 years after initial start-up for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status, as required by § 63.506(e)(5)(vii).

(7) Where a storage vessel is located at a major source that includes one or more process units which place material into, or receive materials from the storage vessel, but the 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 (g)(7)(i) through (g)(7)(iv) of this section.

(i) The storage vessel may only be assigned to a process unit that utilizes the storage vessel and does not have an intervening storage vessel for that product (or raw material, as appropriate). With respect to any process unit, an intervening storage vessel means a storage vessel connected by hard-piping both to the process unit and to the storage vessel in the tank farm so that product or raw material entering or leaving the process unit flows into (or from) the intervening storage vessel and does not flow directly into (or from) the storage vessel in the tank farm.

(ii) If there is no process unit at the major source that meets the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, this subpart does not apply to the storage vessel.

(iii) If there is only one process unit at the major source that meets the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to that process unit. Applicability of this subpart to the storage vessel shall then be determined according to the provisions of paragraph (a) of this section.

(iv) If there are two or more process units at the major source that meet the criteria of paragraph (g)(7)(i) of this section with respect to a storage vessel, the storage vessel shall be assigned to one of those process units according to the provisions of paragraphs (g)(3) through (g)(6) of this section. The predominant use shall be determined

among only those process units that meet the criteria of paragraph (g)(7)(i) of this section.

(8) If the storage vessel begins receiving material from (or sending material to) a process unit that was not included in the initial determination, or ceases to receive material from (or send material to) a process unit that was included in the initial determination, the owner or operator shall re-evaluate the applicability of this subpart to that storage vessel.

(h) *Recovery operations equipment ownership determination.* The owner or operator shall follow the procedures specified in paragraphs (h)(1) through (h)(6) of this section to determine to which process unit recovery operations equipment shall be assigned. Paragraph (h)(7) of this section specifies when an owner or operator is required to re-determine to which process unit the recovery operations equipment is assigned.

(1) If recovery operations equipment is already subject to another subpart of 40 CFR part 63 on September 5, 1996, that recovery operations equipment shall be assigned to the process unit subject to the other subpart.

(2) If recovery operations equipment is dedicated to a single process unit, the recovery operations equipment shall be assigned to that process unit.

(3) If recovery operations equipment is shared among process units, then the recovery operations equipment shall be assigned to that process unit located on the same plant site as the recovery operations equipment that has the greatest input into or output from the recovery operations equipment (i.e., that process unit has the predominant use of the recovery operations equipment).

(4) If predominant use cannot be determined for recovery operations equipment that is shared among process units and if one of those process units is an EPPU subject to this subpart, the recovery operations equipment shall be assigned to the EPPU subject to this subpart.

(5) If predominant use cannot be determined for recovery operation equipment that is shared among process units and if more than one of the process units are EPPUs that have different

primary products and that are subject to this subpart, then the owner or operator shall assign the recovery operation equipment to any one of those EPPUs.

(6) If the predominant use of recovery operations equipment varies from year to year, then the predominant use shall be determined based on the utilization that occurred during the year preceding September 5, 1996 for existing affected sources or based on the expected utilization for the 5 years following September 5, 1996 for existing affected sources, whichever is the more representative of the expected operations for the recovery operations equipment, and based on the expected utilization for the first 5 years after initial start-up for new affected sources. The determination of predominant use shall be reported in the Notification of Compliance Status, as required by § 63.506(e)(5)(viii).

(7) If a piece of recovery operations equipment begins receiving material from a process unit that was not included in the initial determination, or ceases to receive material from a process unit that was included in the initial determination, the owner or operator shall reevaluate the applicability of this subpart to that recovery operations equipment.

(i) *Changes or additions to plant sites.* The provisions of paragraphs (1)(1) through (1)(4) of this section apply to owners or operators that change or add to their plant site or affected source. Paragraph (1)(5) provides examples of what are and are not considered process changes for purposes of paragraph (1) of this section. Paragraph (1)(6) of this section discusses reporting requirements.

(1) *Adding an EPPU to a plant site.* The provisions of paragraphs (1)(1)(i) and (1)(1)(ii) of this section apply to owners or operators that add one or more EPPUs to a plant site.

(i) If a group of one or more EPPUs that produce the same primary product is added to a plant site, the added group of one or more EPPUs and associated equipment, as listed in paragraph (a)(4) of this section, shall be a new affected source and shall comply with the requirements for a new affected source in this subpart upon ini-

tial start-up or by June 19, 2000, whichever is later, if the added group of one or more EPPUs meets the criteria in either paragraph (1)(1)(i)(A) or (1)(1)(i)(B) of this section, and if the criteria in either paragraph (1)(1)(i)(C) or (1)(1)(i)(D) of this section are met.

(A) The construction of the group of one or more EPPUs commenced after June 12, 1995.

(B) The construction or reconstruction, for process units that have become EPPUs, commenced after June 12, 1995.

(C) The group of one or more EPPUs and associated equipment, as listed in paragraph (a)(4) of this section, has the potential to emit 10 tons per year or more of any HAP or 25 tons per year or more of any combination of HAP, and the primary product of the group of one or more EPPUs is currently produced at the plant site as the primary product of an affected source; or

(D) The primary product of the group of one or more EPPUs is not currently produced at the plant site as the primary product of an affected source, and the plant site meets, or after the addition of the group of one or more EPPUs and associated equipment, as listed in paragraph (a)(4) of this section, will meet the definition of a major source.

(i) If a group of one or more EPPUs that produce the same primary product is added to a plant site, and the group of one or more EPPUs does not meet the criteria specified in paragraph (1)(1)(i) of this section, and the plant site meets, or after the addition will meet, the definition of a major source, the group of one or more EPPUs and associated equipment, as listed in paragraph (a)(4) of this section, shall comply with the requirements for an existing affected source in this subpart upon initial start-up; by June 19, 2001; or by 6 months after notifying the Administrator that a process unit has been designated as an EPPU (in accordance with paragraph (f)(3)(iii) of this section), whichever is later.

(2) *Adding emission points or making process changes to existing affected sources.* The provisions of paragraphs (1)(2)(i) through (1)(2)(ii) of this section apply to owners or operators that add emission points or make process changes to an existing affected source.



(1) If any components are replaced at an existing affected source such that the criteria specified in paragraphs (1)(2)(1)(A) through (1)(2)(1)(B) of this section are met, the entire affected source shall be a new affected source and shall comply with the requirements for a new affected source upon initial start-up or by June 19, 2000, whichever is later.

(A) The replacement of components meets the definition of reconstruction in § 63.482(b); and

(B) Such reconstruction commenced after June 12, 1995.

(i) If any components are replaced at an existing affected source such that the criteria specified in paragraphs (1)(2)(1)(A) and (1)(2)(1)(B) of this section are not met and that replacement of components creates one or more emission points (i.e., either newly created Group 1 emission points or emission points that change from Group 2 to Group 1) or causes any other emission point to be added (i.e., Group 2 emission points, back-end process operations subject to §§ 63.493 and 63.500, and heat exchange systems and equipment leak components subject to § 63.502), the resulting emission point(s) shall be subject to the applicable requirements for an existing affected source. The resulting emission point(s) shall be in compliance by 120 days after the date of initial start-up or by the appropriate compliance date specified in § 63.481 (i.e., July 31, 1997 for most equipment leak components subject to § 63.502, and June 19, 2001 for emission points other than equipment leaks), whichever is later.

(ii) If an addition or process change (not including a process change that solely replaces components) is made that creates one or more Group 1 emission points (i.e., either newly created Group 1 emission points or emission points that change group status from Group 2 to Group 1) or causes any other emission point to be added (i.e., Group 2 emission points, back-end process operations subject to §§ 63.493 through 63.500, and heat exchange systems and equipment leak components subject to § 63.502), the resulting emission point(s) shall be subject to the applicable requirements for an existing affected source. The resulting emission point(s)

shall be in compliance by 120 days after the date of initial start-up or by the appropriate compliance date specified in § 63.481 (i.e., July 31, 1997 for most equipment leak components subject to § 63.502, and June 19, 2001 for emission points other than equipment leaks), whichever is later.

(3) *Existing affected source requirements for surge control vessels and bottoms receivers that become subject to subpart H requirements.* If a process change or the addition of an emission point causes a surge control vessel or bottoms receiver to become subject to § 63.170 under this paragraph (1), the owner or operator shall be in compliance upon initial start-up or by June 19, 2001, whichever is later.

(4) *Existing affected source requirements for compressors that become subject to subpart H requirements.* If a process change or the addition of an emission point causes a compressor to become subject to § 63.164 under this paragraph (1), the owner or operator shall be in compliance upon initial start-up or by the compliance date for that compressor, as specified in § 63.481(d), whichever is later.

(5) *Determining what are and are not process changes.* For purposes of paragraph (1) of this section, examples of process changes include, but are not limited to, changes in feedstock type or process catalyst type, or whenever the replacement, removal, or addition of recovery equipment, or equipment changes that increase production capacity. For purposes of paragraph (1) of this section, process changes do not include: process upsets, unintentional temporary process changes, and changes that do not alter the equipment configuration and operating conditions.

(6) *Reporting requirements for owners or operators that change or add to their plant site or affected source.* Owners or operators that change or add to their plant site or affected source, as discussed in paragraphs (1)(1) and (1)(2) of this section, shall submit a report as specified in § 63.506(e)(7)(v).

(j) *Applicability of this subpart.* Paragraphs (j)(1) through (4) of this section shall be followed during periods of non-operation of the affected source or any part thereof.

§ 63.480

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(1) The emission limitations set forth in this subpart and the emission limitations referred to 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. However, if a period of non-operation of one portion of an affected source does not affect the ability of a particular emission point to comply with the emission limitations to which it is subject, then that emission point shall still be required to comply with the applicable emission limitations of this subpart during the period of non-operation. For example, if there is an overpressure in the reactor area, a storage vessel that is part of the affected source would still be required to be controlled in accordance with the emission limitations in § 63.484.

(2) The emission limitations set forth in subpart H of this part, as referred to in § 63.502, shall apply at all times, except during periods of non-operation of the affected source (or specific portion thereof) in which the lines are drained and depressurized, resulting in cessation of the emissions to which § 63.502 applies.

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

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

(i) To establish the affirmative defense in any action to enforce such a limit, the owners or operators of a fa-

cility must timely meet the notification requirements of paragraph (j)(4)(ii) of this section, and must prove by a preponderance of evidence that:

(A) The excess emissions were caused by a sudden, infrequent, and unavoidable failure of air pollution control and monitoring equipment, or a process to operate in a normal and usual manner; and could not have been prevented through careful planning, proper design, or better operation and maintenance practices; did not stem from any activity or event that could have been foreseen and avoided, or planned for; and were not part of a recurring pattern indicative of inadequate design, operation, or maintenance;

(B) Repairs were made as expeditiously as possible when the applicable emission limitations were being exceeded. Off-shift and overtime labor were used, to the extent practicable to make these repairs;

(C) The frequency, amount, and duration of the excess emissions (including any bypass) were minimized to the maximum extent practicable during periods of such emissions;

(D) If the excess emissions 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;

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

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

(G) All of the actions in response to the excess emissions were documented by properly signed, contemporaneous operating logs;

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

(I) The owner or operator has prepared a written root cause analysis, the purpose of which is to determine, correct, and eliminate the primary causes of the malfunction and the excess emissions resulting from the malfunction event at issue. The analysis

shall also specify, using the best monitoring methods and engineering judgment, the amount of excess emissions that were the result of the malfunction.

(1) *Notification.* The owner or operator of the facility experiencing an exceedance of its emission limit(s) during a malfunction shall notify the Administrator by telephone or facsimile (FAX) transmission as soon as possible, but no later than 2 business days after the initial occurrence of the malfunction, if it wishes to avail itself of an affirmative defense to civil penalties for that malfunction. The owner or operator seeking to assert an affirmative defense shall also submit a written report to the Administrator within 45 days of the initial occurrence of the exceedance of the standard in this subpart to demonstrate, with all necessary supporting documentation, that it has met the requirements set forth in paragraph (j)(4)(i) of this section. The owner or operator may seek an extension of this deadline for up to 30 additional days by submitting a written request to the Administrator before the expiration of the 45 day period. Until a request for an extension has been approved by the Administrator, the owner or operator is subject to the requirement to submit such report within 45 days of the initial occurrence of the exceedance.

[62 FR 48925, Sept. 5, 1996, as amended at 65 FR 38036, June 19, 2000; 66 FR 36927, July 16, 2001; 71 FR 20456, Apr. 20, 2006; 76 FR 22586, Apr. 21, 2011]

**§ 63.481 Compliance dates and relationship of this subpart to existing applicable rules.**

(a) Affected sources are required to achieve compliance on or before the dates specified in paragraphs (b) through (d) of this section. Paragraph (e) of this section provides information on requesting compliance extensions. Paragraphs (f) through (l) of this section discuss the relationship of this subpart to subpart A and to other applicable rules. Where an override of another authority of the Act is indicated in this subpart, only compliance with the provisions of this subpart is required. Paragraph (m) of this section specifies the meaning of time periods.

(b) New affected sources that commence construction or reconstruction after June 12, 1995 shall be in compliance with this subpart upon initial start-up or by June 19, 2000, whichever is later.

(c) With the exceptions provided in paragraphs (c)(1) through (3) of this section, existing affected sources shall be in compliance with this subpart no later than June 19, 2001, as provided in § 63.6(c), unless an extension has been granted as specified in paragraph (e) of this section.

(1) Existing affected sources producing epichlorohydrin elastomer, butyl rubber, neoprene rubber, and nitrile butadiene rubber shall be in compliance with the applicable emission limitation in § 63.494(a)(4) no later than April 23, 2012.

(2) Existing affected sources producing butyl rubber and ethylene propylene rubber shall be in compliance with § 63.485(q)(1) no later than April 23, 2012.

(3) Compliance with § 63.502 is covered by paragraph (d) of this section.

(d) Except as provided for in paragraphs (d)(1) through (d)(6) of this section, existing affected sources shall be in compliance with § 63.502 no later than July 31, 1997, unless an extension has been granted pursuant to paragraph (e) of this section.

(1) Compliance with the compressor provisions of § 63.164 shall occur no later than September 5, 1997 for any compressor meeting one or more of the criteria in paragraphs (d)(1)(i) through (d)(1)(iv) of this section, if the work can be accomplished without a process unit shutdown, as defined in § 63.161.

(i) The seal system will be replaced;

(ii) A barrier fluid system will be installed;

(iii) A new barrier fluid will be utilized which requires changes to the existing barrier fluid system; or

(iv) The compressor will be modified to permit connecting the compressor to a fuel gas system or closed vent system, or be modified so that emissions from the compressor can be routed to a process.

(2) Compliance with the compressor provisions of § 63.164 shall occur no later than March 5, 1998, for any compressor meeting all the criteria in

paragraphs (d)(2)(i) through (d)(2)(iv) of this section.

(1) The compressor meets one or more of the criteria specified in paragraphs (d)(1)(i) through (d)(1)(iv) of this section:

(i) The work can be accomplished without a process unit shutdown as defined in § 63.161;

(ii) The additional time is actually necessary, due to the unavailability of parts beyond the control of the owner or operator; and

(iv) The owner or operator submits the request for a compliance extension to the appropriate U.S. Environmental Protection Agency (EPA) Regional Office at the address listed in § 63.13 no later than 45 days before the compliance date. The request for a compliance extension shall contain the information specified in § 63.6(i)(6)(i)(A), (B), and (D). Unless the EPA Regional Office objects to the request for a compliance extension within 30 days after receipt of the request, the request shall be deemed approved.

(3) If compliance with the compressor provisions of § 63.164 cannot reasonably be achieved without a process unit shutdown, the owner or operator shall achieve compliance no later than September 5, 1998. The owner or operator who elects to use this provision shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(4) Compliance with the compressor provisions of § 63.164 shall occur no later than September 5, 1999 for any compressor meeting one or more of the criteria in paragraphs (d)(4)(i) through (d)(4)(iii) of this section. The owner or operator who elects to use these provisions shall submit a request for an extension of compliance in accordance with the requirements of paragraph (d)(2)(iv) of this section.

(i) Compliance cannot be achieved without replacing the compressor:

(ii) Compliance cannot be achieved without recasting the distance piece; or

(iii) Design modifications are required to connect to a closed-vent or recovery system.

(5) Compliance with the surge control vessel and bottoms receiver provisions

of § 63.170 shall occur no later than June 19, 2001.

(6) Compliance with the heat exchange system provisions of § 63.104 shall occur no later than June 19, 2001.

(e) Pursuant to section 112(i)(3)(B) of the Act, an owner or operator may request an extension allowing the existing affected source up to 1 additional year to comply with section 112(d) standards. For purposes of this subpart, a request for an extension shall be submitted to the permitting authority as part of the operating permit application, or to the Administrator as a separate submittal or as part of the Precompliance Report. Requests for extensions shall be submitted no later than 120 days prior to the compliance dates specified in paragraphs (b) through (d) of this section, or as specified elsewhere in this subpart, except as provided in paragraph (e)(3) of this section. The dates specified in § 63.6(i) for submittal of requests for extensions shall not apply to this subpart.

(1) A request for an extension of compliance shall include the data described in § 63.6(i)(6)(i)(A), (B), and (D).

(2) The requirements in §§ 63.6(i)(8) through 63.6(i)(14) shall govern the review and approval of requests for extensions of compliance with this subpart.

(3) An owner or operator may submit a compliance extension request after the date specified in paragraph (e) of this section, provided that the need for the compliance extension arose after that date, and the need arose due to circumstances beyond reasonable control of the owner or operator. This request shall include, in addition to the information specified in paragraph (e)(1) of this section, a statement of the reasons additional time is needed and the date when the owner or operator first learned of the circumstances necessitating a request for a compliance extension under this paragraph (e)(3).

(f) Table 1 of this subpart specifies the provisions of subpart A that apply and those that do not apply to owners and operators of affected sources subject to this subpart. For the purposes of this subpart, Table 3 of subpart F is not applicable.

(g) Table 2 of this subpart summarizes the provisions of subparts F, G,

and H that apply and those that do not apply to owners and operators of affected sources subject to this subpart.

(h)(1) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 63, subpart I, is required to comply only with the provisions of this subpart.

(2) Sources subject to 40 CFR part 63, subpart I that have elected to comply through a quality improvement program, as specified in § 63.175 or § 63.176 or both, may elect to continue these programs without interruption as a means of complying with this subpart. In other words, becoming subject to this subpart does not restart or reset the "compliance clock" as it relates to reduced burden earned through a quality improvement program.

(i) After the compliance dates specified in this section, a storage vessel that is assigned to an affected source subject to this subpart and 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. After the compliance dates specified in this section, that storage vessel shall no longer be subject to 40 CFR part 60, subpart Kb.

(j) After the compliance dates specified in this section, an affected source subject to this subpart that is also subject to the provisions of 40 CFR part 60, subpart VV, is required to comply only with the provisions of this subpart. After the compliance dates specified in this section, the source shall no longer be subject to 40 CFR part 60, subpart VV.

(k) *Applicability of other regulations for monitoring, recordkeeping or reporting with respect to combustion devices, recovery devices, or recapture devices.* After the compliance dates specified in this subpart, if any combustion device, recovery device or recapture device subject to this subpart is also subject to monitoring, recordkeeping, and reporting requirements in 40 CFR part 264 subpart AA or CC, or is subject to monitoring and recordkeeping requirements in 40 CFR part 265 subpart AA or CC and the owner or operator complies with the periodic reporting requirements under 40 CFR part 264 subpart

AA 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. The owner or operator shall identify which option has been selected in the Notification of Compliance Status required by § 63.506(e)(5).

(1) *Applicability of other requirements for heat exchange systems or waste management units.* Paragraphs (1)(1) and (1)(2) of this section address instances in which certain requirements from other regulations also apply for the same heat exchange system(s) or waste management unit(s) that are subject to this subpart.

(1) After the applicable compliance date specified in this subpart, if a heat exchange system subject to this subpart is also subject to a standard identified in paragraphs (1)(1)(i) or (ii) of this section, compliance with the applicable provisions of the standard identified in paragraphs (1)(1)(i) or (ii) of this section shall constitute compliance with the applicable provisions of this subpart with respect to that heat exchange system.

(1) Subpart F of this part.

(ii) A subpart of this part which requires compliance with § 63.104 (e.g., subpart JJJ of this part).

(2) After the applicable compliance date specified in this subpart, if any waste management unit subject to this subpart is also subject to a standard identified in paragraph (1)(2)(i) or (ii) of this section, compliance with the applicable provisions of the standard identified in paragraph (1)(2)(i) or (ii) of this section shall constitute compliance with the applicable provisions of this subpart with respect to that waste management unit.

(1) Subpart G of this part.

(ii) A subpart of this part which requires compliance with §§ 63.132 through 63.147 (e.g., subpart JJJ of this part).

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

(1) Notwithstanding time periods specified in this subpart for completion of required tasks, such time periods may be changed by mutual agreement between the owner or 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 calendar 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 paragraphs (m)(2)(i) or (m)(2)(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 2 weeks for tasks that shall be performed monthly, at least 1 month for tasks that shall be performed each quarter, or at least 3 months for tasks that shall be performed annually; or

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

(3) In all instances where a provision of this subpart 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 that the task is conducted at a reasonable interval after completion of the task during the previous period.

[62 FR 46925, Sept. 5, 1996, as amended at 62 FR 1837, Jan. 14, 1997; 64 FR 11542, Mar. 9, 1999; 64 FR 35028, June 30, 1999; 65 FR 38042, June 19, 2000; 76 FR 22587, Apr. 21, 2011]

**§ 63.482 Definitions.**

(a) The following terms used in this subpart shall have the meaning given them in § 63.2, § 63.101, § 63.111, § 63.161, or the Act, as specified after each term:

Act (§ 63.2)  
 Administrator (§ 63.2)  
 Automated monitoring and recording system (§ 63.111)  
 Boiler (§ 63.111)  
 Bottoms receiver (§ 63.161)  
 By compound (§ 63.111)  
 By-product (§ 63.101)  
 Car-seal (§ 63.111)  
 Closed-vent system (§ 63.111)  
 Combustion device (§ 63.111)  
 Commenced (§ 63.2)  
 Compliance date (§ 63.2)  
 Connector (§ 63.161)  
 Continuous monitoring system (§ 63.2)  
 Distillation unit (§ 63.111)  
 Duot work (§ 63.161)  
 Emission limitation (Section 302(k) of the Act)  
 Emission standard (§ 63.2)  
 Emissions averaging (§ 63.2)  
 EPA (§ 63.2)  
 Equipment leak (§ 63.101)  
 External floating roof (§ 63.111)  
 Fill or filling (§ 63.111)  
 Fixed capital cost (§ 63.2)  
 Flame zone (§ 63.111)  
 Floating roof (§ 63.111)  
 Flow indicator (§ 63.111)  
 Fuel gas system (§ 63.101)  
 Halogens and hydrogen halides (§ 63.111)  
 Hard-piping (§ 63.111)  
 Hazardous air pollutant (§ 63.2)  
 Heat exchange system (§ 63.101)  
 Impurity (§ 63.101)  
 Incinerator (§ 63.111)  
 In organic hazardous air pollutant service or in organic HAP service (§ 63.161)  
 Instrumentation system (§ 63.161)  
 Internal floating roof (§ 63.111)  
 Lesser quantity (§ 63.2)  
 Major source (§ 63.2)  
 Malfunction (§ 63.2)  
 Oil-water separator or organic-water separator (§ 63.111)  
 Open-ended valve or line (§ 63.161)  
 Operating permit (§ 63.101)  
 Organic monitoring device (§ 63.111)  
 Owner or operator (§ 63.2)  
 Performance evaluation (§ 63.2)  
 Performance test (§ 63.2)  
 Permitting authority (§ 63.2)  
 Plant site (§ 63.101)  
 Potential to emit (§ 63.2)  
 Pressure release (§ 63.161)  
 Primary fuel (§ 63.111)  
 Process heater (§ 63.111)  
 Process unit shutdown (§ 63.161)  
 Process wastewater (§ 63.101)  
 Process wastewater stream (§ 63.111)

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Reactor (§ 63.111)  
Recapture device (§ 63.101)  
Repaired (§ 63.161)  
Research and development facility (§ 63.101)  
Routed to a process or route to a process (§ 63.161)  
Run (§ 63.2)  
Secondary fuel (§ 63.111)  
Sensor (§ 63.161)  
Specific gravity monitoring device (§ 63.111)  
Start-up, shutdown, and malfunction plan (§ 63.101)  
State (§ 63.2)  
Stationary Source (§ 63.2)  
Surge control vessel (§ 63.161)  
Temperature monitoring device (§ 63.111)  
Test method (§ 63.2)  
Treatment process (§ 63.111)  
Unit operation (§ 63.101)  
Visible emission (§ 63.2)

(b) All other terms used in this subpart shall have the meaning given them in this section. If a term is defined in a subpart referenced above and in this section, it shall have the meaning given in this section for purposes of this subpart.

*Affected source* is defined in § 63.480(a).

*Affirmative defense* means, in the context of an enforcement proceeding, a response or a 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.

*Aggregate batch vent stream* means a gaseous emission stream containing only the exhausts from two or more batch front-end process vents that are ducted, hard-piped, or otherwise connected together for a continuous flow.

*Annual average batch vent concentration* is determined using Equation 17, as described in § 63.488(h)(2) for halogenated compounds.

*Annual average batch vent flow rate* is determined by the procedures in § 63.488(e)(3).

*Annual average concentration*, as used in the wastewater provisions, means the flow-weighted annual average concentration, as determined according to the procedures specified in § 63.144(b), with the exceptions noted in § 63.501, for the purposes of this subpart.

*Annual average flow rate*, as used in the wastewater provisions, means the annual average flow rate, as determined according to the procedures specified in § 63.144(c), with the excep-

tions noted in § 63.501, for the purposes of this subpart.

*Average batch vent concentration* is determined by the procedures in § 63.488(b)(5)(iii) for HAP concentrations and is determined by the procedures in § 63.488(h)(1)(iii) for organic compounds containing halogens and hydrogen halides.

*Average batch vent flow rate* is determined by the procedures in § 63.488(e)(1) and (e)(2).

*Back-end* refers to the unit operations in an EPPU following the stripping operations. Back-end process operations include, but are not limited to, filtering, coagulation, blending, concentration, drying, separating, and other finishing operations, as well as latex and crumb storage. Back-end does not include storage and loading of finished product or emission points that are regulated under §§ 63.484, 63.501, or 63.502 of this subpart.

*Batch cycle* means the operational step or steps, from start to finish, that occur as part of a batch unit operation.

*Batch emission episode* means a discrete emission venting episode associated with a single batch unit operation. Multiple batch emission episodes may occur from a single batch unit operation.

*Batch front-end process vent* means a process vent with annual organic HAP emissions greater than 225 kilograms per year from a batch unit operation within an affected source and located in the front-end of a process unit. Annual organic HAP emissions are determined as specified in § 63.488(b) at the location specified in § 63.488(a)(2).

*Batch mass input limitation* means an enforceable restriction on the total mass of HAP or material that can be input to a batch unit operation in one year.

*Batch mode* means the discontinuous bulk movement of material through a unit operation. Mass, temperature, concentration, and other properties may vary with time. For a unit operation operated in a batch mode (i.e., batch unit operation), the addition of material and withdrawal of material do not typically occur simultaneously.

*Batch process* means, for the purposes of this subpart, a process where the reactor(s) is operated in a batch mode.

*Batch unit operation* means a unit operation operated in a batch mode.

*Block polymer* means a polymer where the polymerization is controlled, usually by performing discrete polymerization steps, such that the final polymer is arranged in a distinct pattern of repeating units of the same monomer.

*Butyl rubber* means a copolymer of isobutylene and other monomers. Typical other monomers include isoprene and methylstyrene. A typical composition of butyl rubber is approximately 85- to 99-percent isobutylene, and 1- to 15-percent other monomers. Most butyl rubber is produced by precipitation polymerization, although other methods may be used. Halobutyl rubber is a type of butyl rubber elastomer produced using halogenated copolymers.

*Combined vent stream*, as used in reference to batch front-end process vents, continuous front-end process vents, and aggregate batch vent streams, means the emissions from a combination of two or more of the aforementioned types of process vents. The primary occurrence of a combined vent stream is as combined emissions from a continuous front-end process vent and a batch front-end process vent.

*Combustion device burner* means a device designed to mix and ignite fuel and air to provide a flame to heat and oxidize waste organic vapors in a combustion device.

*Compounding unit* means a unit operation which blends, melts, and resolidifies solid polymers for the purpose of incorporating additives, colorants, or stabilizers into the final elastomer product. A unit operation whose primary purpose is to remove residual monomers from polymers is not a compounding unit.

*Construction* means the on-site fabrication, erection, or installation of an affected source. Construction also means the on-site fabrication, erection, or installation of a process unit or combination of process units which subsequently becomes an affected source or part of an affected source, due to a change in primary product.

*Continuous front-end process vent* means a process vent located in the front-end of a process unit and con-

taining greater than 0.005 weight percent total organic HAP from a continuous unit operation within an affected source. The total organic HAP weight percent is determined after the last recovery device, as described in § 63.115(a), and is determined as specified in § 63.115(c).

*Continuous mode* means the continuous movement of material through a unit operation. Mass, temperature, concentration, and other properties typically approach steady-state conditions. For a unit operation operated in a continuous mode (i.e., continuous unit operation), the simultaneous addition of raw material and withdrawal of product is typical.

*Continuous process* means, for the purposes of this subpart, a process where the reactor(s) is operated in a continuous mode.

*Continuous record* means documentation, either in hard copy or computer readable form, of data values measured at least once every 15 minutes and recorded at the frequency specified in § 63.506(d) or (h).

*Continuous recorder* means a data recording device that either records an instantaneous data value at least once every 15 minutes or records 1-hour or more frequent block average values.

*Continuous unit operation* means a unit operation operated in a continuous mode.

*Control device* is defined in § 63.111, except that the term "continuous front-end process vent" shall apply instead of the term "process vent," for the purpose of this subpart.

*Crumb rubber dry weight* means the weight of the polymer, minus the weight of water and residual organics.

*Drawing unit* means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then pulling it through an orifice to create a continuously extruded product.

*Elastomer* means any polymer having a glass transition temperature lower than  $-10^{\circ}\text{C}$ , or a glass transition temperature between  $-10^{\circ}\text{C}$  and  $25^{\circ}\text{C}$  that is capable of undergoing deformation (stretching) of several hundred percent and recovering essentially when the stress is removed. For the purposes of



this subpart, resins are not considered to be elastomers.

*Elastomer product* means one of the following types of products, as they are defined in this section:

- (1) Butyl Rubber;
- (2) Epichlorohydrin Elastomer;
- (3) Ethylene Propylene Rubber;
- (4) Hypalon™;
- (5) Neoprene;
- (6) Nitrile Butadiene Rubber;
- (7) Nitrile Butadiene Latex;
- (8) Polybutadiene Rubber/Styrene Butadiene Rubber by Solution;
- (9) Polysulfide Rubber;
- (10) Styrene Butadiene Rubber by Emulsion; and
- (11) Styrene Butadiene Latex.

*Elastomer product process unit (EPPU)* means a collection of equipment assembled and connected by hard-piping or duct work, used to process raw materials and to manufacture an elastomer product as its primary product. This collection of equipment includes unit operations; recovery operations equipment; process vents; storage vessels, as determined in §63.480(g); equipment that is identified in §63.149; and the equipment that is subject to the equipment leak provisions as specified in §63.502. Utilities, lines and equipment not containing process fluids, and other non-process lines, such as heating and cooling systems which do not combine their materials with those in the processes they serve, are not part of an elastomer product process unit. An elastomer product process unit consists of more than one unit operation.

*Elastomer type* means one of the elastomers listed under "elastomer product" in this section. Each elastomer identified in that definition represents a different elastomer type.

*Emission point* means an individual continuous front-end process vent, batch front-end process vent, back-end process vent, storage vessel, waste management unit, heat exchange system, or equipment leak, or equipment subject to §63.149.

*Emulsion process* means a process where the monomer(s) is dispersed in droplets throughout a water phase, with the aid of an emulsifying agent such as soap or a synthetic emulsifier. The polymerization occurs either with-

in the emulsion droplet or in the aqueous phase.

*Epichlorohydrin elastomer* means an elastomer formed from the polymerization or copolymerization of epichlorohydrin (EPI). The main epichlorohydrin elastomers are polyepichlorohydrin, epi-ethylene oxide (EO) copolymer, epi-allyl glycidyl ether (AGE) copolymer, and epi-EO-AGE terpolymer. Epoxies produced by the copolymerization of EPI and bisphenol A are not epichlorohydrin elastomers.

*Equipment* means, for the purposes of the provisions in §63.502(a) through (m) and the requirements in subpart H that are referred to in §63.502(a) through (m), each pump, compressor, agitator, pressure relief device, sampling connection system, open-ended valve or line, valve, connector, surge control vessel, bottoms receiver, and instrumentation system in organic hazardous air pollutant service; and any control devices or systems required by subpart H of this part.

*Ethylene-propylene rubber* means an ethylene-propylene copolymer or an ethylene-propylene terpolymer. Ethylene-propylene copolymers (EPM) result from the polymerization of ethylene and propylene and contain a saturated chain of the polymethylene type. Ethylene-propylene terpolymers (EPDM) are produced in a similar manner as EPM, except that a third monomer is added to the reaction sequence. Typical third monomers include ethylidene norbornene, 1,4-hexadiene, or dicyclopentadiene. Ethylidene norbornene is the most commonly used. The production process includes, but is not limited to, polymerization, recycle, recovery, and packaging operations. The polymerization reaction may occur in either a solution process or a suspension process.

*Existing affected source* is defined in §63.480(a)(3).

*Existing process unit* means any process unit that is not a new process unit.

*Extruding unit* means a unit operation which converts polymer into a different shape by melting or mixing the polymer and then forcing it through an orifice to create a continuously extruded product.

*Flexible operation unit* means a process unit that manufactures different chemical products, polymers, or resins periodically by alternating raw materials or operating conditions. These units are also referred to as campaign plants or blocked operations.

*Front-end* refers to the unit operations in an EPPU prior to, and including, the stripping operations. For all gas-phased reaction processes, all unit operations are considered to be front-end.

*Gas-phased reaction process* means an elastomer production process where the reaction occurs in a gas phase, fluidized bed.

*Glass transition temperature* means the temperature at which an elastomer polymer becomes rigid and brittle.

*Grade* means a group of recipes of an elastomer type having similar characteristics such as molecular weight, monomer composition, significant mooney values, and the presence or absence of extender oil and/or carbon black. More than one recipe may be used to produce the same grade.

*Group 1 batch front-end process vent* means a batch front-end process vent releasing annual organic HAP emissions greater than or equal to 11,800 kg/yr and with a cutoff flow rate, calculated in accordance with §63.488(f), greater than or equal to the annual average batch vent flow rate. Annual organic HAP emissions and annual average batch vent flow rate are determined at the exit of the batch unit operation, as described in §63.488(a)(2). Annual organic HAP emissions are determined as specified in §63.488(b), and annual average batch vent flow rate is determined as specified in §63.488(e).

*Group 2 batch front-end process vent* means a batch front-end process vent that does not fall within the definition of a Group 1 batch front-end process vent.

*Group 1 continuous front-end process vent* means a continuous front-end process vent for which the flow rate is greater than or equal to 0.005 standard cubic meter per minute, the total organic HAP concentration is greater than or equal to 50 parts per million by volume, and the total resource effectiveness index value, calculated ac-

ording to §63.115, is less than or equal to 1.0.

*Group 2 continuous front-end process vent* means a continuous front-end process vent for which the flow rate is less than 0.005 standard cubic meter per minute, the total organic HAP concentration is less than 50 parts per million by volume, or the total resource effectiveness index value, calculated according to §63.115, is greater than 1.0.

*Group 1 storage vessel* means a storage vessel at an existing affected source that meets the applicability criteria specified in Table 3 of this subpart, or a storage vessel at a new affected source that meets the applicability criteria specified in Table 4 of this subpart.

*Group 2 storage vessel* means a storage vessel that does not fall within the definition of a Group 1 storage vessel.

*Group 1 wastewater stream* means a wastewater stream consisting of process wastewater from an existing or new affected source that meets the criteria for Group 1 status in §63.132(c), with the exceptions listed in §63.501(a)(10) for the purposes of this subpart (i.e., for organic HAP as defined in this section).

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

*Halogenated aggregate batch vent stream* means an aggregate batch vent stream determined to have a total mass emission rate of halogen atoms contained in organic compounds of 3,750 kg/yr or greater determined by the Procedures presented in §63.488(h).

*Halogenated batch front-end process vent* means a batch front-end process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 3,750 kg/yr or greater determined by the procedures presented in §63.488(h).

*Halogenated continuous front-end process vent* means a continuous front-end process vent determined to have a mass emission rate of halogen atoms contained in organic compounds of 0.45 kg/hr or greater determined by the procedures presented in §63.115(d)(2)(v).

*High conversion latex* means a latex where all monomers are reacted to at least 95 percent conversion.

*Highest-HAP recipe* for a product means the recipe of the product with the highest total mass of HAP charged to the reactor during the production of a single batch of product.

*Hypalon™* means a chlorosulfonated polyethylene that is a synthetic rubber produced for uses such as wire and cable insulation, shoe soles and heels, automotive components, and building products.

*Initial start-up* means the first time a new or reconstructed affected source begins production of an elastomer product, or, for equipment added or changed as described in §63.480(i), the first time the equipment is put into operation to produce an elastomer product. Initial start-up does not include operation solely for testing equipment. Initial start-up does not include subsequent start-ups of an affected source or portion thereof following shutdowns, or following changes in product for flexible operation units, or following recharging of equipment in batch operation.

*Latex* means a colloidal aqueous emulsion of elastomer. A latex may be further processed into finished products by direct use as a coating or as a foam, or it may be precipitated to separate the rubber particles, which are then used in dry state to prepare finished products.

*Latex weight* includes the weight of the polymer and the weight of the water solution.

*Maintenance wastewater* is defined in §63.101, except that the term "elastomer product process unit" shall apply whenever the term "chemical manufacturing process unit" is used. Further, the generation of wastewater from the routine rinsing or washing of equipment in batch operation between batches is not maintenance wastewater, but is considered to be process wastewater, for the purposes of this subpart.

*Maximum true vapor pressure* is defined in §63.111, except that the terms "transfer" and "transferred" shall not apply for the purposes of this subpart.

*Multicomponent system* means, as used in conjunction with batch front-end process vents, a stream whose liquid and/or vapor contains more than one compound.

*Neoprene* means a polymer of chloroprene (2-chloro-1,3-butadiene). The free radical emulsion process is generally used to produce neoprene, although other methods may be used.

*New process unit* means a process unit for which the construction or reconstruction commenced after June 12, 1995.

*Nitrile butadiene latex* means a polymer consisting primarily of unsaturated nitriles and dienes, usually acrylonitrile and 1,3-butadiene, that is sold as a latex.

*Nitrile butadiene rubber* means a polymer consisting primarily of unsaturated nitriles and dienes, usually acrylonitrile and 1,3-butadiene, not including nitrile butadiene latex.

*On-site or on site* means, with respect to records required to be maintained by this subpart or required by another subpart referenced by this subpart, that records are stored at a location within a major source which encompasses the affected source. On-site includes, but is not limited to, storage at the affected source or EPPU to which the records pertain, or storage in central files elsewhere at the major source.

*Operating day* means the period defined by the owner or operator in the Notification of Compliance Status required by §63.506(e)(5). The operating day is the period for which daily average monitoring values and batch cycle daily average monitoring values are determined.

*Organic hazardous air pollutant(s) (organic HAP)* means one or more of the chemicals listed in Table 5 of this subpart or any other chemical which:

- (1) Is knowingly produced or introduced into the manufacturing process other than as an impurity; and
- (2) Is listed in Table 2 of subpart F of this part.

*Polybutadiene rubber by solution* means a polymer of 1,3-butadiene produced using a solution process.

*Polysulfide rubber* means a polymer produced by reacting sodium polysulfide and chloroethyl formal. Polysulfide rubber may be produced as latexes or solid product.

*Primary product* is defined in and determined by the procedures specified in §63.480(f).

*Process section* means the equipment designed to accomplish a general but well-defined task in polymers production. Process sections include raw materials preparation, polymerization reaction, and material recovery. A process section may be dedicated to a single EPPU or may be common to more than one EPPU.

*Process unit* means a collection of equipment assembled and connected by hard-piping or duct work, used to process raw materials and to manufacture a product.

*Process vent* means a gaseous emission stream from a unit operation that is discharged to the atmosphere either directly or after passing through one or more control, recovery, or recapture devices. Unit operations that may have process vents are condensers, distillation units, reactors, or other unit operations within the EPPU. Process vents exclude pressure releases, gaseous streams routed to a fuel gas system(s), and leaks from equipment regulated under § 63.502. A gaseous emission stream is no longer considered to be a process vent after the stream has been controlled and monitored in accordance with the applicable provisions of this subpart.

*Product* means a polymer produced using the same monomers, and varying in additives (e.g., initiators, terminators, etc.); catalysts; or in the relative proportions of monomers, that is manufactured by a process unit. With respect to polymers, more than one recipe may be used to produce the same product, and there can be more than one grade of a product. As an example, styrene butadiene latex and butyl rubber each represent a different product. Product also means a chemical that is not a polymer, is manufactured by a process unit. By-products, isolated intermediates, impurities, wastes, and trace contaminants are not considered products.

*Recipe* means a specific composition, from among the range of possible compositions that may occur within a product, as defined in this section. A recipe is determined by the proportions of monomers and, if present, other reactants and additives that are used to make the recipe. For example, styrene butadiene latex without additives;

styrene butadiene latex with an additive; and styrene butadiene latex with different proportions of styrene to butadiene are all different recipes of the same product, styrene butadiene latex.

*Reconstruction* means the replacement of components of an affected source or of a previously unaffected stationary source that becomes an affected source as a result of the replacement, to such an extent that:

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the provisions of this subpart.

(1) The fixed capital cost of the new components exceeds 50 percent of the fixed capital cost that would be required to construct a comparable new affected source; and

(2) It is technologically and economically feasible for the reconstructed source to meet the provisions of this subpart.

*Recovery device* means:

(1) An individual unit of equipment capable of and normally used for the purpose of recovering chemicals for:

(i) Use;

(ii) Reuse;

(iii) Fuel value (i.e., net heating value); or

(iv) For sale for use, reuse, or fuel value (i.e., net heating value).

(2) Examples of equipment that may be recovery devices include absorbers, carbon adsorbers, condensers, oil-water separators or organic-water separators, or organic removal devices such as decanters, strippers, or thin film evaporation units. For the purposes of the monitoring, recordkeeping, or reporting requirements of this subpart, recapture devices are considered recovery devices.

*Recovery operations equipment* means the equipment used to separate the components of process streams. Recovery operations equipment includes distillation units, condensers, etc. Equipment used for wastewater treatment and recovery or recapture devices used as control devices shall not be considered recovery operations equipment.

*Residual* is defined in § 63.111, except that when the definition in § 63.111 uses the term "Table 9 compounds," the term "organic HAP listed in Table 5 of subpart U of this part" shall apply, for the purposes of this subpart.

*Resin*, for the purposes of this subpart, means a polymer with the following characteristics:

- (1) The polymer is a block polymer;
- (2) The manufactured polymer does not require vulcanization to make useful products;
- (3) The polymer production process is operated to achieve at least 99 percent monomer conversion; and
- (4) The polymer process unit does not recycle unreacted monomer back to the process.

*Shutdown* means for purposes including, but not limited to, periodic maintenance, replacement of equipment, or repair, the cessation of operation of an affected source, an EPPU within an affected source, a waste management unit or unit operation within an affected source, or equipment required or used to comply with this subpart, or the emptying or degassing of a storage vessel. For purposes of the wastewater provisions of § 63.501, shutdown does not include the routine rinsing or washing of equipment in batch operation between batches. For purposes of the batch front-end process vent provisions in §§ 63.486 through 63.492, the cessation of equipment in batch operation is not a shutdown, unless the equipment undergoes maintenance, is replaced, or is repaired.

*Solution process* means a process where both the monomers and the resulting polymers are dissolved in an organic solvent.

*Start-up* means the setting into operation of an affected source, an EPPU within the affected source, a waste management unit or unit operation within an affected source, or equipment required or used to comply with this subpart, or a storage vessel after emptying and degassing. For both continuous and batch front-end processes, start-up includes initial start-up and operation solely for testing equipment. For both continuous and batch front-end processes, start-up does not include the recharging of equipment in batch operation. For continuous front-end

processes, start-up includes transitional conditions due to changes in product for flexible operation units. For batch front-end processes, start-up does not include transitional conditions due to changes in product for flexible operation units.

*Steady-state conditions* means that all variables (temperatures, pressures, volumes, flow rates, etc.) in a process do not vary significantly with time; minor fluctuations about constant mean values may occur.

*Storage vessel* means a tank or other vessel that is used to store liquids that contain one or more organic HAP. Storage vessels do not include:

- (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 with capacities smaller than 38 cubic meters;
- (4) Vessels and equipment storing and/or handling material that contains no organic HAP, or organic HAP as impurities only;
- (5) Surge control vessels and bottoms receivers; and
- (6) Wastewater storage tanks.

*Stripper* means a unit operation where stripping occurs.

*Stripping* means the removal of organic compounds from a raw elastomer product. In the production of an elastomer, stripping is a discrete step that occurs after the reactors and before the dryers (other than those dryers with a primary purpose of devolatilization) and other finishing operations. Examples of types of stripping include steam stripping, direct volatilization, chemical stripping, and other methods of devolatilization. For the purposes of this subpart, devolatilization that occurs in dryers (other than those dryers with a primary purpose of devolatilization), extruders, and other finishing operations is not stripping.

*Styrene butadiene latex* means a polymer consisting primarily of styrene and butadiene monomer units produced using an emulsion process and sold as a latex.

*Styrene butadiene rubber by emulsion* means a polymer consisting primarily of styrene and butadiene monomer

units produced using an emulsion process. Styrene butadiene rubber by emulsion does not include styrene butadiene latex.

*Styrene butadiene rubber by solution* means a polymer that consists primarily of styrene and butadiene monomer units and is produced using a solution process.

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

*Suspension process* means a polymerization process where the monomer(s) is in a state of suspension, with the help of suspending agents in a medium other than water (typically an organic solvent). The resulting polymers are not soluble in the reactor medium.

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

*Total resource effectiveness index value or TRE index value* means a measure of the supplemental total resource requirement per unit reduction of organic HAP associated with a continuous front-end process vent stream, based on vent stream flow rate, emission rate of organic HAP, net heating value, and corrosion properties (whether or not the continuous front-end process vent stream contains halogenated compounds), as quantified by the equations given under § 63.115, with the exceptions noted in § 63.485.

*Vent stream*, as used in reference to batch front-end process vents, continuous front-end process vents, and aggregate batch vent streams, means the emissions from one or more process vents.

*Waste management unit* is defined in § 63.111, except that where the definition in § 63.111 uses the term "chemical manufacturing process unit," the term "EPPU" shall apply for the purposes of this subpart.

*Wastewater* means water that:

(1) Contains either:

(i) An annual average concentration of organic HAP listed in Table 5 of this subpart of at least 5 parts per million by weight and has an annual average flow rate of 0.02 liter per minute or greater; or

(ii) An annual average concentration of organic HAP listed on Table 5 of this subpart of at least 10,000 parts per million by weight at any flow rate; and

(2) Is discarded from an EPPU that is part of an affected source. Wastewater is process wastewater or maintenance wastewater.

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

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11542, Mar. 9, 1999; 65 FR 38044, June 19, 2000; 66 FR 36927, July 16, 2001; 76 FR 22587, Apr. 21, 2011]

#### § 63.483 Emission standards.

(a) At all times, each owner or operator must operate and maintain any affected source subject to the requirements of this subpart, 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 this standard have been achieved. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator which may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source. Except as allowed under paragraphs (b) through (d) of this section, the owner or operator of an existing or new affected source shall comply with the provisions in:

(1) Section 63.484 for storage vessels;

(2) Section 63.485 for continuous front-end process vents;

(3) Sections 63.486 through 63.492 for batch front-end process vents;

(4) Sections 63.493 through 63.500 for back-end process operations;

(5) Section 63.501 for wastewater;

(6) Section 63.502 for equipment leaks;

(7) Section 63.504 for additional test methods and procedures;

(8) Section 63.505 for monitoring levels and excursions; and

(9) Section 63.506 for general reporting and recordkeeping requirements.

(b) When emissions of different kinds (i.e., emissions from continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, process wastewater, and/or in-process equipment subject to § 63.149) are combined, and at least one of the emission streams would be classified as Group 1 in the absence of combination with other emission streams, the owner or operator of an affected source shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section, as appropriate. For purposes of this paragraph (b), owners or operators of affected sources with combined emission streams containing one or more batch front-end process vents and containing one or more continuous front-end process vents may comply with either paragraph (b)(1) or (b)(2) of this section, as appropriate. For purposes of this paragraph (b), owners or operators of affected sources with combined emission streams containing one or more batch front-end process vents but not containing one or more continuous process vents shall comply with paragraph (b)(3) of this section.

(1) Comply with the applicable requirements of this subpart for each kind of emission in the stream as specified in paragraphs (a)(1) through (a)(6) of this section.

(2) Comply with the first set of requirements, identified in paragraphs (b)(2)(i) through (b)(2)(v) of this section, which applies to any individual emission stream that is included in the combined stream, where either that emission stream would be classified as Group 1 in the absence of combination with other emission streams, or the

owner or operator chooses to consider that emission stream to be Group 1 for purposes of this paragraph. Compliance with the first applicable set of requirements identified in paragraphs (b)(2)(i) through (b)(2)(v) of this section constitutes compliance with all other requirements in paragraphs (b)(2)(i) through (b)(2)(v) of this section applicable to other types of emissions in the combined stream.

(i) The requirements of this subpart for Group 1 continuous front-end process vents, including applicable monitoring, recordkeeping, and reporting;

(ii) The requirements of § 63.119(e), as specified in § 63.484, for control of emissions from Group 1 storage vessels, including applicable monitoring, recordkeeping, and reporting;

(iii) The requirements of § 63.139, as specified in § 63.501, for control devices used to control emissions from waste management units, including applicable monitoring, recordkeeping, and reporting;

(iv) The requirements of § 63.139, as specified in § 63.501, for closed vent systems for control of emissions from in-process equipment subject to § 63.149, as specified in § 63.501, including applicable monitoring, recordkeeping, and reporting; or

(v) The requirements of this subpart for aggregate batch vent streams, including applicable monitoring, recordkeeping, and reporting.

(3) The owner or operator of an affected source with combined emission streams containing one or more batch front-end process vents, but not containing one or more continuous front-end process vents, shall comply with paragraphs (b)(3)(i) and (b)(3)(ii) of this section.

(i) The owner or operator of the affected source shall comply with § 63.486 for the batch front-end process vent stream(s).

(ii) The owner or operator of the affected source shall comply with either paragraph (b)(1) or (b)(2) of this section, as appropriate, for the remaining emission streams.

(c) Instead of complying with §§ 63.484, 63.485, 63.493, and 63.501, the owner or operator of an existing affected source may elect to control any or all of the storage vessels, continuous

front-end process vents, batch front-end process vents, aggregate batch vent streams, back-end process emissions, and wastewater streams and associated waste management units within the affected source, to different levels using an emissions averaging compliance approach that uses the procedures specified in §63.503. The restrictions concerning which emission points may be included in an emissions average, including how many emission points may be included, are specified in §63.503(a)(1). An owner or operator electing to use emissions averaging shall still comply with the provisions of §§63.484, 63.485, 63.486, 63.493, and 63.501 for affected source emission points not included in the emissions average.

(d) A State may decide not to allow the use of the emissions averaging compliance approach specified in paragraph (c) of this section.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38048, June 19, 2000; 76 FR 22588, Apr. 21, 2011]

**§63.484 Storage vessel provisions.**

(a) This section applies to each storage vessel that is assigned to an affected source, as determined by §63.480(g). Except for those storage vessels exempted by paragraph (b) of this section, the owner or operator of affected sources shall comply with the requirements of §§63.119 through 63.123 and 63.148, with the differences noted in paragraphs (c) through (s) of this section, for the purposes of this subpart.

(b) Storage vessels described in paragraphs (b)(1) through (b)(7) of this section are exempt from the storage vessel requirements of this section.

(1) Storage vessels containing styrene-butadiene latex;

(2) Storage vessels containing latex products other than styrene-butadiene latex, located downstream of the stripping operations;

(3) Storage vessels containing high conversion latex products;

(4) Storage vessels located downstream of the stripping operations at affected sources subject to the back-end residual organic HAP limitation located in §63.494(a)(1) through (3), that are complying through the use of stripping technology, as specified in §63.495;

(5) Storage vessels containing styrene;

(6) Storage vessels containing acrylamide; and

(7) Storage vessels containing epichlorohydrin.

(c) When the term "storage vessel" is used in §§63.119 through 63.123, the definition of this term in §63.482 shall apply for the purposes of this subpart.

(d) When the term "Group 1 storage vessel" is used in §§63.119 through 63.123, the definition of this term in §63.482 shall apply for the purposes of this subpart.

(e) When the term "Group 2 storage vessel" is used in §§63.119 through 63.123, the definition of this term in §63.482 shall apply for the purposes of this subpart.

(f) When the emissions averaging provisions of §63.150 are referred to in §63.119 and §63.123, the emissions averaging provisions contained in §63.503 shall apply for the purposes of this subpart.

(g) When December 31, 1992 is referred to in §63.119, June 12, 1995 shall apply instead, for the purposes of this subpart.

(h) When April 22, 1994 is referred to in §63.119, June 19, 2000 shall apply instead, for the purposes of this subpart.

(i) The owner or operator of an affected source shall comply with this paragraph instead of §63.120(d)(1)(i) for the purposes of this subpart. If the control device used to comply with §63.119(e) is also used to comply with any of the requirements found in §§63.485 through 63.501, the performance test required in or accepted by the applicable requirements in §§63.485 through 63.501 is acceptable for demonstrating compliance with §63.119(e), for the purposes of this subpart. The owner or operator will not be required to prepare a design evaluation for the control device as described in §63.120(d)(1)(i), if the performance test meets the criteria specified in paragraphs (i)(1) and (i)(2) of this section.

(1) The performance test demonstrates that the control device achieves greater than or equal to the required control efficiency specified in §63.119(e)(1) or §63.119(e)(2), as applicable; and



(2) The performance test is submitted as part of the Notification of Compliance Status required by § 63.506(e)(5).

(j) When the term "range" is used in §§ 63.120(d)(3)(i), 63.120(d)(5), and 63.122(g)(2), the term "level" shall apply instead, for the purposes of this subpart.

(k) For purposes of this subpart, the monitoring plan required by § 63.120(d)(2) shall specify for which control devices the owner or operator has selected to follow the procedures for continuous monitoring specified in § 63.505. For those control devices for which the owner or operator has selected to not follow the procedures for continuous monitoring specified in § 63.505, the monitoring plan shall include a description of the parameter or parameters to be monitored to ensure that the control device is being properly operated and maintained, an explanation of the criteria used for selection of that parameter (or parameters), and the frequency with which monitoring will be performed (e.g., when the liquid level in the storage vessel is being raised), as specified in § 63.120(d)(2)(i).

(l) For purposes of this subpart, the monitoring plan required by § 63.122(b) shall be included in the Notification of Compliance Status required by § 63.506(e)(5).

(m) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.120, 63.122, and 63.123, the Notification of Compliance Status requirements contained in § 63.506(e)(5) shall apply for the purposes of this subpart.

(n) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.120 and 63.122, the Periodic Report requirements contained in § 63.506(e)(6) shall apply for the purposes of this subpart.

(o) When other reports as required in § 63.152(d) are referred to in § 63.122, the reporting requirements contained in § 63.506(e)(7) shall apply for the purposes of this subpart.

(p) When the Initial Notification requirements contained in § 63.151(b) are referred to in §§ 63.119 through 63.123, for the purposes of this subpart the owner or operator of an affected source need not comply.

(q) When the determination of equivalence criteria in § 63.102(b) are referred to in § 63.121(a), the provisions in § 63.6(g) shall apply for the purposes of this subpart.

(r) When § 63.119(a) requires compliance according to the schedule provisions in § 63.100, owners and operators of affected sources shall instead comply with the requirements in §§ 63.119(a)(1) through 63.119(a)(4) by the compliance date for storage vessels, which is specified in § 63.481.

(s) In § 63.120(e)(1), instead of the reference to § 63.11(b), the requirements of § 63.504(c) shall apply.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38049, June 19, 2000; 76 FR 22588, Apr. 21, 2011]

#### § 63.485 Continuous front-end process vent provisions.

(a) For each continuous front-end process vent located at an affected source, the owner or operator shall comply with the requirements of §§ 63.113 through 63.118, except as provided for in paragraphs (b) through (v) of this section. The owner or operator of continuous front-end process vents that are combined with one or more batch front-end process vents shall comply with paragraph (o) or (p) of this section.

(b) When the term "process vent" is used in §§ 63.113 through 63.118, the term "continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(c) When the term "halogenated process vent" is used in §§ 63.113 through 63.118, the term "halogenated continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(d) When the term "Group 1 process vent" is used in §§ 63.113 through 63.118, the term "Group 1 continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(e) When the term "Group 2 process vent" is used in §§ 63.113 through 63.118, the term "Group 2 continuous front-end process vent," and the definition of this term in § 63.482 shall apply for the purposes of this subpart.

(f) When December 31, 1992 (i.e., the proposal date for subpart G of this part) is referred to in § 63.113, June 12, 1995 shall instead apply, for the purposes of this subpart.

(g) When §§ 63.151(f), alternative monitoring parameters, and 63.152(e), submission of an operating permit, are referred to in §§ 63.114(c) and 63.117(e), 63.506(f), alternative monitoring parameters, and § 63.506(e)(8), submission of an operating permit, respectively, shall apply for the purposes of this subpart.

(h) When the Notification of Compliance Status requirements contained in § 63.152(b) are referred to in §§ 63.114, 63.117, and 63.118, the Notification of Compliance Status requirements contained in § 63.506(e)(5) shall apply for the purposes of this subpart.

(i) When the Periodic Report requirements contained in § 63.152(c) are referred to in §§ 63.117 and 63.118, the Periodic Report requirements contained in § 63.506(e)(6) shall apply for the purposes of this subpart.

(j) When the definition of excursion in § 63.152(c)(2)(i)(A) is referred to in § 63.118(f)(2), the definition of excursion in § 63.505(g) and (h) shall apply for the purposes of this subpart.

(k) When § 63.114(e) or § 63.117(f) specifies that an owner or operator shall submit the information required in § 63.152(b) in order to establish the parameter monitoring range, the owner or operator of an affected source shall comply with the provisions of § 63.505 for establishing the parameter monitoring level and shall comply with § 63.506(e)(5) for the purposes of reporting information related to the establishment of the parameter monitoring level, for the purposes of this subpart. Further, the term "level" shall apply whenever the term "range" is used in §§ 63.114, 63.117, and 63.118.

(1) When reports of process changes are required under § 63.118(g), (h), (i), or (j), paragraphs (1)(1) through (1)(4) of this section shall apply for the purposes of this subpart. In addition, for the purposes of this subpart paragraph (1)(5) of this section applies, and § 63.118(k) does not apply to owners or operators of affected sources.

(1) For the purposes of this subpart, whenever a process change, as defined in § 63.115(e), is made that causes a

Group 2 continuous front-end process vent to become a Group 1 continuous front-end process vent, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator of the affected source shall comply with the Group 1 provisions in §§ 63.113 through 63.118 in accordance with § 63.480(1)(2)(i) or (i)(2)(ii), as applicable.

(2) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous front-end process vent with a TRE greater than 4.0 to become a Group 2 continuous front-end process vent with a TRE less than 4.0, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.481.

(3) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous front-end process vent with a flow rate less than 0.005 standard cubic meter per minute (scmm) to become a Group 2 continuous front-end process vent with a flow rate of 0.005 scmm or greater and a TRE index value less than or equal to 4.0, the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.481.

(4) Whenever a process change, as defined in § 63.115(e), is made that causes a Group 2 continuous front-end process vent with an organic HAP concentration less than 50 parts per million by volume (ppmv) to become a Group 2 continuous front-end process vent with an organic HAP concentration of 50 ppmv or greater and a TRE index value less than or equal to 4.0, the owner or

operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. A description of the process change shall be submitted with the report of the process change, and the owner or operator shall comply with the provisions in § 63.113(d) by the dates specified in § 63.481.

(5) The owner or operator is not required to submit a report of a process change if one of the conditions listed in paragraphs (1)(5)(i), (1)(5)(ii), (1)(5)(iii), or (1)(5)(iv) of this section is met.

(i) The change does not meet the description of a process change in § 63.115(e);

(ii) The vent stream flow rate is recalculated according to § 63.115(e) and the recalculated value is less than 0.005 standard cubic meter per minute;

(iii) The organic HAP concentration of the vent stream is recalculated according to § 63.115(e) and the recalculated value is less than 50 parts per million by volume; or

(iv) The TRE index value is recalculated according to § 63.115(e) and the recalculated value is greater than 4.0.

(m) When § 63.118 (periodic reporting and recordkeeping requirements) refers to § 63.152(f), the recordkeeping requirements in § 63.506(d) shall apply for the purposes of this subpart.

(n) When §§ 63.115 and 63.116 refer to Table 2 of subpart F of this part, the owner or operator is only required to consider organic HAP listed on Table 5 of this subpart, for the purposes of this subpart.

(o) If a batch front-end process vent or aggregate batch vent stream is combined with a continuous front-end process vent, the owner or operator of the affected source containing the combined vent stream shall comply with paragraph (o)(1); with paragraph (o)(2) and with paragraph (o)(3) or (o)(4); or with paragraph (o)(5) of this section, as appropriate.

(1) If a batch front-end process vent or aggregate batch vent stream is combined with a Group 1 continuous front-end process vent prior to the combined vent stream being routed to a control device, the owner or operator of the affected source containing the combined vent stream shall comply with the re-

quirements in paragraph (o)(1)(i) or (o)(1)(ii) of this section.

(i) All requirements for a Group 1 process vent stream in §§ 63.113 through 63.118, except as otherwise provided in this section. As specified in § 63.504(a)(1), performance tests shall be conducted at maximum representative operating conditions. For the purpose of conducting a performance test on a combined vent stream, maximum representative operating conditions shall be when batch emission episodes are occurring that result in the highest organic HAP emission rate (for the combined vent stream) that is achievable during one of the periods listed in § 63.504(a)(1)(i) or § 63.504(a)(1)(ii), without causing any of the situations described in paragraphs (o)(1)(i)(A) through (o)(1)(i)(C) of this section to occur.

(A) Causing damage to equipment;

(B) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or

(C) Necessitating that the owner or operator make product in excess of demand.

(ii) Comply with the provisions in § 63.483(b)(1), as allowed under § 63.483(b).

(2) If a batch front-end process vent or aggregate batch vent stream is combined with a continuous front-end process vent prior to the combined vent stream being routed to a recovery device, the TRE index value for the combined vent stream shall be calculated at the exit of the last recovery device. The TRE shall be calculated during periods when one or more batch emission episodes are occurring that result in the highest organic HAP emission rate (in the combined vent stream that is being routed to the recovery device) that is achievable during the 6-month period that begins 3 months before and ends 3 months after the TRE calculation, without causing any of the situations described in paragraphs (o)(2)(i) through (o)(2)(iii) of this section to occur.

(i) Causing damage to equipment;

(ii) Necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or

(iii) Necessitating that the owner or operator make product in excess of demand.

(3) If the combined vent stream described in paragraph (o)(2) of this section meets the requirements in paragraphs (o)(3)(i), (o)(3)(ii), and (o)(3)(iii) of this section, the combined vent stream shall be subject to the requirements for Group 1 process vents in §§ 63.113 through 63.118, except as otherwise provided in this section, as applicable. Performance tests for the combined vent stream shall be conducted at maximum representative operating conditions, as described in paragraph (o)(1) of this section.

(i) The TRE index value of the combined stream is less than or equal to 1.0;

(ii) The flow rate of the combined vent stream is greater than or equal to 0.005 standard cubic meter per minute; and

(iii) The total organic HAP concentration is greater than or equal to 50 parts per million by volume for the combined vent stream.

(4) If the combined vent stream described in paragraph (o)(2) of this section meets the requirements in paragraph (o)(4)(i), (ii), or (iii) of this section, the combined vent stream shall be subject to the requirements for Group 2 process vents in §§ 63.113 through 63.118, except as otherwise provided in this section, as applicable.

(i) The TRE index value of the combined vent stream is greater than 1.0;

(ii) The flow rate of the combined vent stream is less than 0.005 standard cubic meter per minute; or

(iii) The total organic HAP concentration is less than 50 parts per million by volume for the combined vent stream.

(5) If a batch front-end process vent or aggregate batch vent stream is combined with a Group 2 continuous front-end process vent, the owner or operator shall comply with the requirements in either paragraph (o)(5)(i) or (o)(5)(ii) of this section.

(i) The owner or operator shall comply with the requirements in §§ 63.113 through 63.118 for Group 1 process vents; or

(ii) The owner or operator shall comply with § 63.487(e)(2) for batch front-

end process vents and aggregate batch vent streams.

(p) If any gas stream that originates outside of an affected source that is subject to this subpart is normally conducted through the same final recovery device as any continuous front-end process vent stream subject to this subpart, the combined vent stream shall comply with all requirements in §§ 63.113 through 63.118, except as otherwise provided in this section, as applicable.

(1) Instead of measuring the vent stream flow rate at the sampling site specified in § 63.115(b)(1), the sampling site for vent stream flow rate shall be prior to the final recovery device and prior to the point at which the gas stream that is not controlled under this subpart is introduced into the combined vent stream.

(2) Instead of measuring total organic HAP or TOC concentrations at the sampling site specified in § 63.115(c)(1), the sampling site for total organic HAP or TOC concentration shall be prior to the final recovery device and prior to the point at which the gas stream that is not controlled under this subpart is introduced into the combined vent stream.

(3) The efficiency of the final recovery device (determined according to paragraph (p)(4) of this section) shall be applied to the total organic HAP or TOC concentration measured at the sampling site described in paragraph (p)(2) of this section to determine the exit concentration. This exit concentration of total organic HAP or TOC shall then be used to perform the calculations outlined in § 63.115(d)(2)(iii) and § 63.115(d)(2)(iv), for the combined vent stream exiting the final recovery device.

(4) The efficiency of the final recovery device is determined by measuring the total organic HAP or TOC concentration using Method 18 or 25A, 40 CFR part 60, appendix A, at the inlet to the final recovery device after the introduction of any gas stream that is not controlled under this subpart, and at the outlet of the final recovery device.

(q) Group 1 halogenated continuous front-end process vents must comply with the provisions of § 63.113(a)(1)(ii)

and §63.113(c), with the exceptions noted in paragraphs (q)(1) and (2) of this section.

(1) Group I halogenated continuous front-end process vents at existing affected sources producing butyl rubber or ethylene propylene rubber using a solution process are exempt from the provisions of §63.113(a)(1)(ii) and §63.113(c) if the conditions in paragraphs (q)(1)(i) and (ii) of this section are met, and shall comply with the requirements in paragraphs (q)(1)(iii) through (vi) of this section. Group I halogenated continuous front-end process vents at new affected sources producing butyl rubber or ethylene propylene rubber using a solution process are not exempt from §63.113(a)(1)(ii) and §63.113(c).

(i) If the halogenated continuous front-end process vent stream was controlled by a combustion device prior to June 12, 1995; and

(ii) If the requirements of §63.113(a)(2); §63.113(a)(3); §63.113(b) and

the associated testing requirements in §63.116; or §63.11(b) and §63.504(c) are met.

(iii) The average HCl emissions from all front-end process operations at affected sources producing butyl rubber and ethylene propylene rubber using a solution process shall not exceed the limits determined in accordance with paragraphs (q)(1)(iii)(A) and (B) of this section for any consecutive 12-month period. The specific limitation for each elastomer type shall be determined based on the calculation or the emissions level provided in paragraphs (q)(1)(iii)(A) and (B) of this section divided by the base year elastomer product that leaves the stripping operation (or the reactor(s), if the plant has no stripper(s)). The limitation shall be calculated and submitted in accordance with paragraph (q)(1)(iv) of this section.

(A) For butyl rubber, the HCl emission limitation shall be calculated using the following equation:

$$BRHClEL = \frac{HCl_{2010}}{P_{2010}} + 1.74$$

Where:

$HCl_{2010}$  = HCl emissions in 2010, megagrams per year (Mg/yr)

BRHClEL = Butyl rubber HCl emission limit, Mg HCl emissions/Mg butyl rubber produced

$P_{2010}$  = Total elastomer product leaving the stripper in 2010, Mg/yr

1.74 = variability factor, unitless

(B) For ethylene propylene rubber using a solution process, the HCl emission limitation, in units of Mg HCl emissions per Mg of ethylene propylene rubber produced, shall be calculated by dividing 27 Mg/yr by the mass of ethylene propylene rubber produced in 2010, in Mg.

(iv) If the front-end process operation is subject to a HCl emission limitation in paragraph (q)(1)(iii) of this section, the owner and operator must submit the information specified in paragraphs (q)(1)(iv)(A) and (B) of this section.

(A) The applicable HCl emission limitation determined in accordance with

paragraphs (q)(1)(iii)(A) and (B) of this section shall be submitted no later than 180 days from the date of publication of the final rule amendments in the FEDERAL REGISTER.

(B) Beginning with the first periodic report required to be submitted by §63.506(e)(6) that is at least 13 months after the compliance date, the total mass of HCl emitted for each of the rolling 12-month periods in the reporting period divided by the total mass of elastomer produced during the corresponding 12-month period, determined in accordance with paragraph (q)(1)(v) of this section.

(v) Compliance with the HCl emission limitations determined in accordance with paragraph (q)(1)(iii) of this section shall be demonstrated in accordance with paragraphs (q)(1)(v)(A) through (E) of this section.

(A) Calculate your HCl emission limitation in accordance with paragraphs (q)(1)(iii)(A) and (B) of this section, as

applicable, record it, and submit it in accordance with paragraph (q)(1)(iv) of this section.

(B) Each month, calculate and record the HCl emissions from all front-end process operations using engineering assessment. Engineering assessment includes, but is not limited to, the following:

(1) Use of material balances;

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

(3) Estimation of HCl concentrations based on saturation conditions; and

(4) Estimation of HCl concentrations based on grab samples of the liquid or vapor.

(C) Each month, record the mass of elastomer product produced.

(D) Each month, calculate and record the sum of the HCl emissions and the mass of elastomer produced for the previous calendar 12-month period.

(E) Each month, divide the total mass of HCl emitted for the previous calendar 12-month period by the total mass of elastomer produced during this 12-month period. This value must be recorded in accordance with paragraph (q)(1)(vi) of this section and reported in accordance with paragraph (q)(1)(iv) of this section.

(vi) If the front-end process operation is subject to an HCl emission limitation in paragraph (q)(1)(iii) of this section, the owner or operator shall maintain the records specified in paragraphs (q)(1)(vi)(A) through (D) of this section.

(A) The applicable HCl emission limitation determined in accordance with paragraphs (q)(1)(iii)(A) and (B) of this section.

(B) The HCl emissions from all front-end process operations for each month, along with documentation of all calculations, and other information used in the engineering assessment to estimate these emissions.

(C) The mass of elastomer product produced each month.

(D) The total mass of HCl emitted for each 12-month period divided by the total mass of elastomer produced during the 12-month period, determined in accordance with paragraph (q)(1)(v) of this section.

(2) Group 1 halogenated continuous front-end process vents at new and ex-

isting affected sources producing an elastomer using a gas-phased reaction process, provided that the requirements of § 63.113(a)(2); § 63.113(a)(3); § 63.113(b) and the associated testing requirements in § 63.116; or § 63.11(b) and § 63.504(c) are met.

(r) The compliance date for continuous front-end process vents subject to the provisions of this section is specified in § 63.481.

(s) *Internal combustion engines.* In addition to the three options for the control of a Group 1 continuous front-end process vent listed in § 63.113(a)(1) through (3), an owner or operator will be permitted to route emissions of organic HAP to an internal combustion engine, provided the conditions listed in paragraphs (s)(1) through (s)(5) of this section are met.

(1) The vent stream routed to the internal combustion engine shall not be a halogenated continuous front-end process vent stream.

(2) The organic HAP is introduced with the primary fuel.

(3) The internal combustion engine is operating at all times that organic HAP emissions are being routed to it. The owner or operator shall demonstrate that the internal combustion engine is operating by continuously monitoring the on/off status of the internal combustion engine.

(4) The owner or operator shall maintain hourly records verifying that the internal combustion engine was operating at all times that emissions were routed to it.

(5) The owner or operator shall include in the Periodic Report a report of all times that the internal combustion engine was not operating while emissions were being routed to it.

(6) If an internal combustion engine meeting the requirements of paragraphs (s)(1) through (5) of this section is used to comply with the provisions of § 63.113(a), the internal combustion engine is exempt from the source testing requirements of § 63.116.

(t) When the provisions of § 63.116(c)(3) and (c)(4) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The

use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (t)(1) and (t)(2) of this section.

(1) 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 of the emissions.

(2) 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.

(u) In § 63.116(a), instead of the reference to § 63.11(b), the requirements in § 63.504(c) shall apply.

(v) When a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.113(a)(2), the correction to 3 percent oxygen is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. In addition, the correction to 3 percent oxygen specified in § 63.116(c)(3) and (c)(3)(iii) is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. Finally, when a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.113(a)(2), an owner or operator shall record and report the outlet concentration required in § 63.117(a)(4)(ii) and (a)(4)(iv) corrected to 3 percent oxygen when supplemental combustion air is used to combust the emissions, for the purposes of this subpart. When supplemental combustion air is not used to combust the emissions, an owner or operator may record and report the outlet concentration required in § 63.117(a)(4)(ii) and (a)(4)(iv) on an uncorrected basis or corrected to 3 percent oxygen, for the purposes of this subpart.

(w) *Shutdown.* (1) During periods of shutdown, a Group 1 continuous front-end process vent at an existing affected source producing butyl rubber or ethylene propylene rubber using a solution process must be routed to a flare until either the organic HAP concentration

in the vent is less than 50 ppmv, or the vent pressure is below 103.421 kPa.

[65 FR 38049, June 19, 2000, as amended at 66 FR 36928, July 16, 2001; 76 FR 22588, Apr. 21, 2011]

**§ 63.486 Batch front-end process vent provisions.**

(a) *Batch front-end process vents.* Except as specified in paragraph (b) of this section, owners and operators of new and existing affected sources with batch front-end process vents shall comply with the requirements in §§ 63.487 through 63.492. The batch front-end process vent group status shall be determined in accordance with § 63.488. Owners or operators of affected sources with batch front-end process vents classified as Group 1 shall comply with the reference control technology requirements for Group 1 batch front-end process vents in § 63.487, the monitoring requirements in § 63.489, the performance test methods and procedures to determine compliance in § 63.490, the recordkeeping requirements in § 63.491, and the reporting requirements in § 63.492. Owners and operators of all Group 2 batch front-end process vents shall comply with the applicable reference control technology requirements in § 63.487, the applicable recordkeeping requirements in § 63.491, and the applicable reporting requirements in § 63.492.

(b) *Aggregate batch vent streams.* Aggregate batch vent streams, as defined in § 63.482, are subject to the control requirements specified in § 63.487(b), as well as the monitoring, testing, recordkeeping, and reporting requirements specified in §§ 63.489 through 63.492 for aggregate batch vent streams.

[65 FR 38052, June 19, 2000]

**§ 63.487 Batch front-end process vents—reference control technology.**

(a) *Batch front-end process vents.* The owner or operator of an affected source with a Group 1 batch front-end process vent, as determined using the procedures in § 63.488, shall comply with the requirements of either paragraph (a)(1) or (a)(2) of this section. Compliance may be based on either organic HAP or TOC.

(1) For each batch front-end process vent, reduce organic HAP emissions using a flare.

(i) The owner or operator of the affected sources shall comply with the requirements of §63.504(c) for the flare.

(ii) Halogenated batch front-end process vents, as defined in §63.482, shall not be vented to a flare.

(2) For each batch front-end process vent, reduce organic HAP emissions for the batch cycle by 90 weight percent using a control device. Owners or operators may achieve compliance with this paragraph through the control of selected batch emission episodes or the control of portions of selected batch emission episodes. Documentation demonstrating how the 90 weight percent emission reduction is achieved is required by §63.490(c)(2).

(b) *Aggregate batch vent streams.* The owner or operator of an aggregate batch vent stream that contains one or more Group 1 batch front-end process vents shall comply with the requirements of either paragraph (b)(1) or (b)(2) of this section. Compliance may be based on either organic HAP or TOC.

(1) For each aggregate batch vent stream, reduce organic HAP emissions using a flare.

(i) The owner or operator of the affected source shall comply with the requirements of §63.504(c) for the flare.

(ii) Halogenated aggregate batch vent streams, as defined in §63.482, shall not be vented to a flare.

(2) For each aggregate batch vent stream, reduce organic HAP emissions by 90 weight percent or to a concentration of 20 ppmv, whichever is less stringent, on a continuous basis using a control device. For purposes of complying with the 20 ppmv outlet concentration standard, the outlet concentration shall be calculated on a dry basis. When a combustion device is used for purposes of complying with the 20 ppmv outlet concentration standard, the concentration shall be corrected to 3 percent oxygen if supplemental combustion air is used to combust the emissions. If supplemental combustion air is not used, a correction to 3 percent oxygen is not required.

(c) *Halogenated emissions.* Halogenated Group 1 batch front-end process vents, halogenated aggregate batch vent streams, and halogenated continuous front-end process vents that are combusted as part of complying with paragraph (a)(2) or (b)(2) of this section, shall be controlled according to either paragraph (c)(1) or (c)(2) of this section.

(1) If a combustion device is used to comply with paragraph (a)(2) or (b)(2) of this section for a halogenated batch front-end process vent or halogenated aggregate batch vent stream, the emissions exiting the combustion device shall be ducted to a halogen reduction device that reduces overall emissions of hydrogen halides and halogens by at least 99 percent before discharge to the atmosphere.

(2) A halogen reduction device may be used to reduce the halogen atom mass emission rate to less than 3,750 kg/yr for batch front-end process vents or aggregate batch vent streams and thus make the batch front-end process vent or aggregate batch vent stream nonhalogenated. The nonhalogenated batch front-end process vent or aggregate batch vent stream shall then comply with the requirements of either paragraph (a) or (b) of this section, as appropriate.

(d) If a boiler or process heater is used to comply with the percent reduction requirement specified in paragraph (a)(2) or (b)(2) of this section, the batch front-end process vent or aggregate batch vent stream shall be introduced into the flame zone of such a device.

(e) *Combination of batch front-end process vents or aggregate batch vent streams with continuous front-end process vents.* If a batch front-end process vent or aggregate batch vent stream is combined with a continuous front-end process vent, the owner or operator shall determine whether the combined vent stream is subject to the provisions of §§63.486 through 63.492 according to paragraphs (e)(1) and (e)(2) of this section.

(1) A batch front-end process vent or aggregate batch vent stream combined with a continuous front-end process vent stream is not subject to the provisions of §§63.486 through 63.492, if the



requirements in paragraph (e)(1)(i) and in either paragraph (e)(1)(ii) or (e)(1)(iii) are met.

(i) The only emissions to the atmosphere from the batch front-end process vent or aggregate batch vent stream prior to being combined with the continuous front-end process vent are from equipment subject to § 63.502.

(ii) The batch front-end vent stream or aggregate batch vent stream is combined with a Group 1 continuous front-end process vent stream prior to the combined vent stream being routed to a control device. In this paragraph (e)(1)(ii), the definition of control device as it relates to continuous front-end process vents shall be used. Furthermore, the combined vent stream discussed in this paragraph (e)(1)(ii) shall be subject to § 63.485(o)(1).

(iii) The batch front-end process vent or aggregate batch vent stream is combined with a continuous front-end process vent stream prior to being routed to a recovery device. In this paragraph (e)(1)(iii), the definition of recovery device as it relates to continuous front-end process vents shall be used. Furthermore, the combined vent stream discussed in this paragraph (e)(1)(iii) shall be subject to § 63.485(o)(2).

(2) If the batch front-end process vent or aggregate batch vent stream is combined with a Group 2 continuous front-end process vent, the group status of the batch front-end process vent shall be determined prior to its combination with the Group 2 continuous front-end process vent, in accordance with § 63.488, and the combined vent stream shall be subject to the requirements for aggregate batch vent streams in §§ 63.486 through 63.492.

(f) *Group 2 batch front-end process vents with annual emissions greater than or equal to the level specified in § 63.488(d).* The owner or operator of a Group 2 batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d) shall comply with the provisions of paragraph (f)(1), (f)(2), or (h) of this section.

(1) The owner or operator shall comply with the requirements in paragraphs (f)(1)(i) through (f)(1)(iv) of this section.

(i) The owner or operator shall establish a batch mass input limitation that ensures that the Group 2 batch front-end process vent does not become a Group 1 batch front-end process vent.

(ii) Over the course of the affected source's "year," as reported in the Notification of Compliance Status in accordance with § 63.506(e)(5)(ix), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.

(iii) The owner or operator of an affected source shall comply with the recordkeeping requirements in § 63.491(d)(2), and the reporting requirements in § 63.492(a)(3), (b) and (c).

(iv) The owner or operator of an affected source shall comply with § 63.488(i) when process changes are made.

(2) Comply with the requirements of this subpart for Group 1 batch front-end process vents.

(g) *Group 2 batch front-end process vents with annual emissions less than the level specified in § 63.488(d).* The owner or operator of a Group 2 batch front-end process vent with annual organic HAP emissions less than the level specified in § 63.488(d), shall comply with paragraph (g)(1), (g)(2), (g)(3), or (g)(4) of this section.

(1) The owner or operator of the affected source shall comply with the requirements in paragraphs (g)(1)(i) through (g)(1)(iv) of this section.

(i) The owner or operator shall establish a batch mass input limitation that ensures emissions do not exceed the appropriate level specified in § 63.488(d).

(ii) Over the course of the affected source's "year," as reported in the Notification of Compliance Status in accordance with § 63.506(e)(5)(ix), the owner or operator shall not charge a mass of HAP or material to the batch unit operation that is greater than the level established as the batch mass input limitation.

(iii) The owner or operator of the affected source shall comply with the recordkeeping requirements in § 63.491(d)(1), and the reporting requirements in § 63.492(a)(2), (b), and (c).

(iv) The owner or operator of the affected source shall comply with

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§ 63.488(1) when process changes are made.

(2) Comply with the requirements of paragraph (f)(1) of this section;

(3) Comply with the requirements of paragraph (f)(2) of this section; or

(4) Comply with the requirements of paragraph (h) of this section.

(h) Owners or operators of Group 2 batch front-end process vents are not required to establish a batch mass input limitation if the batch front-end process vent is Group 2 at the conditions specified in paragraphs (h)(1) and (h)(2) of this section and if the owner or operator complies with the record-keeping provisions in §§ 63.491(a)(1) through (3), 63.491(a)(9), and 63.491(a)(4) through (6) as applicable, and the reporting requirements in § 63.492(a)(5) and (6) and (b).

(1) Emissions for the single highest-HAP recipe (considering all products that are produced in the batch unit operation) are used in the group determination; and

(2) The group determination assumes that the batch unit operation is operating at the maximum design capacity of the EPPU for 12 months.

(62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11542, Mar. 9, 1999; 65 FR 38052, June 19, 2000; 66 FR 36928, July 16, 2001)

**§ 63.488 Methods and procedures for batch front-end process vent group determination.**

(a) *General requirements.* Except as provided in paragraph (a)(3) of this section, the owner or operator of batch front-end process vents at affected sources shall determine the group status of each batch front-end process vent in accordance with the provisions of this section. This determination may be based on either organic HAP or TOC emissions.

(1) The procedures specified in paragraphs (b) through (g) shall be followed to determine the group status of each batch front-end process vent. This determination shall be made in accordance with either paragraph (a)(1)(i) or (a)(1)(ii) of this section.

(i) An owner or operator may choose to determine the group status of a batch front-end process vent based on the expected mix of products. For each product, emission characteristics of

the single highest-HAP recipe, as defined in paragraph (a)(1)(iii) of this section, for that product, shall be used in the procedures in paragraphs (b) through (i) of this section.

(ii) An owner or operator may choose to determine the group status of a batch front-end process vent based on annualized production of the single highest-HAP recipe, as defined in paragraph (a)(1)(iii) of this section, considering all products produced or processed in the batch unit operation. The annualized production of the highest-HAP recipe shall be based exclusively on the production of the single highest-HAP recipe of all products produced or processed in the batch unit operation for a 12 month period. The production level used may be the actual production rate. It is not necessary to assume a maximum production rate (i.e., 8,760 hours per year at maximum design production).

(iii) The single highest-HAP recipe for a product means the recipe of the product with the highest total mass of HAP charged to the reactor during the production of a single batch of product.

(2) The annual uncontrolled organic HAP or TOC emissions and annual average batch vent flow rate shall be determined at the exit from the batch unit operation. For the purposes of these determinations, the primary condenser operating as a reflux condenser on a reactor or distillation column, the primary condenser recovering monomer, reaction products, by-products, or solvent from a stripper operated in batch mode, and the primary condenser recovering monomer, reaction products, by-products, or solvent from a distillation operation operated in batch mode shall be considered part of the batch unit operation. All other devices that recover or oxidize organic HAP or TOC vapors shall be considered control devices as defined in § 63.482.

(3) The owner or operator of a batch front-end process vent complying with the flare provisions in § 63.487(a)(1) or § 63.487(b)(1) or routing the batch front-end process vent to a control device to comply with the requirements in § 63.487(a)(2) or § 63.487(b)(2) is not required to perform the batch front-end

process vent group determination described in this section, but shall comply with all requirements applicable to Group 1 batch front-end process vents.

(b) *Determination of annual emissions.* The owner or operator shall calculate annual uncontrolled TOC or organic HAP emissions for each batch front-end process vent using the methods described in paragraphs (b)(1) through (b)(8) of this section. To estimate emissions from a batch emissions episode, owners or operators may use either the emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section, or direct measurement as specified in paragraph (b)(5) of this section. Engineering assessment may also be used to estimate emissions from a batch emission episode, but only under the conditions described in paragraph (b)(6) of this section. In using the emissions estimation equations in paragraphs (b)(1) through (b)(4) of this section, individual component vapor pressure and molecular weight may be obtained from standard references. Methods to determine individual HAP partial pressures in multicomponent sys-

tems are described in paragraph (b)(9) of this section. Other variables in the emissions estimation equations may be obtained through direct measurement, as defined in paragraph (b)(5) of this section, through engineering assessment, as defined in paragraph (b)(6)(1) of this section, by process knowledge, or by any other appropriate means. Assumptions used in determining these variables must be documented. Once emissions for the batch emission episode have been determined using either the emissions estimation equations, direct measurement, or engineering assessment, emissions from a batch cycle shall be calculated in accordance with paragraph (b)(7) of this section, and annual emissions from the batch front-end process vent shall be calculated in accordance with paragraph (b)(8) of this section.

(1) TOC or organic HAP emissions from the purging of an empty vessel shall be calculated using Equation 1. This equation does not take into account evaporation of any residual liquid in the vessel.

$$E_{\text{episode}} = \frac{(V_{\text{ves}})(P)(MW_{\text{WAVG}})}{RT} (1 - 0.37^m) \quad [\text{Eq. 1}]$$

Where:

$E_{\text{episode}}$  = Emissions, kg/episode.

$V_{\text{ves}}$  = Volume of vessel,  $\text{m}^3$ .

$P$  = TOC or total organic HAP partial pressure, kPa.

$MW_{\text{WAVG}}$  = Weighted average molecular weight of TOC or organic HAP in vapor,

determined in accordance with paragraph (b)(4)(1)(D) of this section,  $\text{kg}/\text{kmol}$ .

$R$  = Ideal gas constant,  $8.314 \text{ m}^3 \cdot \text{kPa}/\text{kmol} \cdot \text{K}$ .

$T$  = Temperature of vessel vapor space,  $^{\circ}\text{K}$ .

$m$  = Number of volumes of purge gas used.

(2) TOC or organic HAP emissions from the purging of a filled vessel shall be calculated using Equation 2.

$$E_{\text{episode}} = \frac{(y)(V_{\text{dr}})(P)^2(MW_{\text{WAVG}})}{RT \left( P - \sum_{i=1}^n P_i x_i \right)} (T_m) \quad [\text{Eq. 2}]$$

Where:

$E_{\text{episode}}$  = Emissions, kg/episode.

$y$  = Saturated mole fraction of all TOC or organic HAP in vapor phase.

$V_{\text{dr}}$  = Volumetric gas displacement rate,  $\text{m}^3/\text{min}$ .

$P$  = Pressure in vessel vapor space, kPa.

$MW_{\text{WAVG}}$  = Weighted average molecular weight of TOC or organic HAP in vapor.

determined in accordance with paragraph (b)(4)(1)(D) of this section. kg/kmol.  
 R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·°K.  
 T = Temperature of vessel vapor space, °K.  
 P<sub>i</sub> = Vapor pressure of TOC or individual organic HAP i, kPa.  
 x<sub>i</sub> = Mole fraction of TOC or organic HAP i in the liquid.

n = Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated.  
 T<sub>m</sub> = Minutes/episode.

(3) Emissions from vapor displacement due to transfer of material into or out of a vessel shall be calculated using Equation 3.

$$E_{\text{episode}} = \frac{(y)(V)(P)(MW_{\text{WAVG}})}{RT} \quad [\text{Eq. 3}]$$

Where:

E<sub>episode</sub> = Emissions, kg/episode.  
 y = Saturated mole fraction of all TOC or organic HAP in vapor phase.  
 V = Volume of gas displaced from the vessel, m<sup>3</sup>.  
 P = Pressure of vessel vapor space, kPa.  
 MW<sub>WAVG</sub> = Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(1)(D) of this section. kg/kmol.  
 R = Ideal gas constant, 8.314 m<sup>3</sup>·kPa/kmol·°K.  
 T = Temperature of vessel vapor space, °K.

(4) Emissions caused by the heating of a vessel shall be calculated using the procedures in either paragraph (b)(4)(1).

(b)(4)(11), or (b)(4)(11) of this section, as appropriate.

(1) If the final temperature to which the vessel contents is heated is lower than 50 K below the boiling point of the HAP in the vessel, then emissions shall be calculated using the equations in paragraphs (b)(4)(1)(A) through (b)(4)(1)(D) of this section.

(A) Emissions caused by heating of a vessel shall be calculated using Equation 4. The assumptions made for this calculation are atmospheric pressure of 760 mm Hg and the displaced gas is always saturated with VOC vapor in equilibrium with the liquid mixture.

$$E_{\text{episode}} = \left[ \frac{\sum_{i=1}^n (P_i)_{T1}}{101.325 - \sum_{i=1}^n (P_i)_{T1}} + \frac{\sum_{i=1}^n (P_i)_{T2}}{101.325 - \sum_{i=1}^n (P_i)_{T2}} \right] \cdot (\Delta n) \left[ \frac{(MW_{\text{WAVG},T1}) + (MW_{\text{WAVG},T2})}{2} \right] \quad [\text{Eq. 4}]$$

Where:

E<sub>episode</sub> = Emissions, kg/episode.  
 (P<sub>i</sub>)<sub>T1</sub>, (P<sub>i</sub>)<sub>T2</sub> = Partial pressure (kPa) TOC or each organic HAP in the vessel headspace at initial (T1) and final (T2) temperature.

n = Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated.

Δn = Number of kilogram-moles (kg-moles) of gas displaced, determined in accordance with paragraph (b)(4)(1)(B) of this section.

101.325 = Constant, kPa.

(MW<sub>WAVG,T1</sub>), (MW<sub>WAVG,T2</sub>) = Weighted average molecular weight of TOC or total organic HAP in the displaced gas stream, determined in accordance with paragraph (b)(4)(1)(D) of this section.

(B) The moles of gas displaced, Δn, is calculated using equation 5.

$$\Delta n = \frac{V_{fs}}{R} \left[ \left( \frac{Pa_1}{T_1} \right) - \left( \frac{Pa_2}{T_2} \right) \right] \quad [\text{Eq. 5}]$$

Where:

$\Delta n$  = Number of kg-moles of gas displaced.  
 $V_{fs}$  = Volume of free space in the vessel,  $m^3$ .  
 $R$  = Ideal gas constant,  $8.314 \text{ m}^3 \cdot \text{kPa} / \text{kmol} \cdot \text{K}$ .  
 $Pa_1$  = Initial noncondensable gas partial pressure in the vessel, kPa.  
 $Pa_2$  = Final noncondensable gas partial pressure, kPa.  
 $T_1$  = Initial temperature of vessel, K.  
 $T_2$  = Final temperature of vessel, K.

(C) The initial and final pressure of the noncondensable gas in the vessel shall be calculated using equation 6.

$$Pa = 101.325 - \sum_{i=1}^n (P_i)_T \quad [\text{Eq. 6}]$$

Where:

$Pa$  = Initial or final partial pressure of non-condensable gas in the vessel headspace, kPa.  
 $101.325$  = Constant, kPa.  
 $(P_i)_T$  = Partial pressure of TOC or each organic HAP  $i$  in the vessel headspace, kPa, at the initial or final temperature ( $T_1$  or  $T_2$ ).  
 $n$  = Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated.

(D) The weighted average molecular weight of TOC or organic HAP in the displaced gas,  $MW_{WAVG}$ , shall be calculated using equation 7:

$$MW_{WAVG} = \frac{\sum_{i=1}^n (\text{mass of } C)_i (\text{molecular weight of } C)_i}{\sum_{i=1}^n (\text{mass of } C)_i} \quad [\text{Eq. 7}]$$

Where:

$c$  = TOC or organic HAP component  
 $n$  = Number of TOC or organic HAP components in stream.

(1) 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 (b)(4)(ii)(A) and (b)(4)(ii)(B) of this section.

(A) For the interval from the initial temperature to the temperature 50 K below the boiling point, emissions shall be calculated using Equation 4, where  $T_2$  is the temperature 50 K below the boiling point.

(B) 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 emissions for each increment shall be calculated using Equation 4.

(1) If the final temperature of the heatup is at or lower than 5 K below the boiling point, the final temperature

for the last increment shall be the final temperature for the heatup, even if the last increment is less than 5 K.

(2) 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) If the vessel contents are heated to the boiling point and the vessel is not operating with a condenser, the final temperature for the final increment shall be the temperature 5 K below the boiling point, even if the last increment is less than 5 K.

(iii) If the vessel is operating with a condenser, and the vessel contents are heated to the boiling point, the primary condenser is considered part of the process, as described in § 63.488(a)(2). Emissions shall be calculated as the sum of Equation 4, which calculates emissions due to heating the vessel contents to the temperature of the gas exiting the condenser.

and Equation 3, which calculates emissions due to the displacement of the remaining saturated noncondensable gas in the vessel. The final temperature in Equation 4 shall be set equal to the

exit gas temperature of the condenser. Equation 3 shall be used as written below in Equation 3a, using free space volume, and  $T_2$  is set equal to the condenser exit gas temperature.

$$E_{\text{episode}} = \frac{(y_i)(V_f)(P_T)(MW_{\text{WAVG}})}{(R)(T)} \quad [\text{Eq. 3a}]$$

Where:

$E_{\text{episode}}$  = Emissions, kg/episode.

$y_i$  = Saturated mole fraction of all TOC or organic HAP in the vapor phase.

$V_f$  = Volume of the free space in the vessel,  $\text{m}^3$ .

$P_T$  = Pressure of the vessel vapor space, kPa.

$MW_{\text{WAVG}}$  = Weighted average molecular weight of TOC or organic HAP in vapor, determined in accordance with paragraph (b)(4)(i)(D) of this section.

$R$  = Ideal gas constant,  $8.314 \text{ m}^3 \cdot \text{kPa} / \text{kmol} \cdot \text{K}$ .

$T$  = Temperature of condenser exit stream K.

(5) The owner or operator may estimate annual emissions for a batch emission episode by direct measurement. If direct measurement is used, the owner or operator shall either perform a test for the duration of a representative batch emission episode or perform a test during only those periods of the batch emission episode for which the emission rate for the entire episode can be determined or for which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options shall develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used provided the results are still relevant to the current batch front-end process vent conditions. Performance tests shall follow the procedures specified in paragraphs (b)(5)(i) through (b)(5)(iii) of this section. The

procedures in either paragraph (b)(5)(iv) or (b)(5)(v) of this section shall be used to calculate the emissions per batch emission episode.

(i) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate.

(ii) Annual average batch vent flow rate shall be determined as specified in paragraph (e) of this section.

(iii) Method 18 or Method 25A, of 40 CFR part 60, appendix A, shall be used to determine the concentration of TOC or organic HAP, as appropriate. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (b)(5)(iii)(A) and (b)(5)(iii)(B) 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 of the emissions.

(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.

(iv) If an integrated sample is taken over the entire batch emission episode to determine average batch vent concentration of TOC or total organic HAP, emissions shall be calculated using Equation 8.

$$E_{\text{episode}} = K \left[ \sum_{j=1}^n (C_j)(M_j) \right] \text{AFR} (T_h) \quad [\text{Eq. 8}]$$

Where:

$E_{\text{episode}}$  = Emissions, kg/episode

$K$  = Constant,  $2.494 \times 10^{-6}$  (ppmv)<sup>-1</sup>(gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

$C_j$  = Average batch vent concentration of TOC or sample organic HAP component  $j$  of the gas stream for the batch emission episode, dry basis, ppmv.

$M_j$  = Molecular weight of TOC or sample organic HAP component  $j$  of the gas stream, dry basis, gm/gm-mole.

AFR = Average batch vent flow rate of gas stream, dry basis, scmm.

$T_h$  = Hours/episode

$n$  = Number of organic HAP in stream. Note: Summation not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(v) If grab samples are taken to determine the average batch vent concentration of TOC or total organic HAP, emissions shall be calculated according to paragraphs (b)(5)(v)(A) and (b)(5)(v)(B) of this section.

(A) For each measurement point, the emission rate shall be calculated using Equation 9.

$$E_{\text{point}} = K \left[ \sum_{j=1}^n C_j M_j \right] \text{FR} \quad [\text{Eq. 9}]$$

Where:

$E_{\text{point}}$  = Emission rate for individual measurement point, kg/hr.

$K$  = Constant,  $2.494 \times 10^{-6}$  (ppmv)<sup>-1</sup> (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

$C_j$  = Concentration of TOC or sample organic HAP component  $j$  of the gas stream, dry basis, ppmv.

$M_j$  = Molecular weight of TOC or sample organic HAP component  $j$  of the gas stream, gm/gm-mole.

FR = Flow rate of gas stream for the measurement point, dry basis, scmm.

$n$  = Number of organic HAP in stream. Note: Summation not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equation 10.

$$E_{\text{episode}} = (\text{DUR}) \left[ \sum_{i=1}^n \frac{E_i}{n} \right] \quad [\text{Eq. 10}]$$

where:

$E_{\text{episode}}$  = Emissions, kg/episode.

DUR = Duration of the batch emission episode, hr/episode.

$E_i$  = Emissions for measurement point  $i$ , kg/hr.

$n$  = Number of measurements.

(6) Engineering assessment may be used to estimate emissions from a batch emission episode, if the criteria in paragraph (b)(6)(1) are met. Data or other information used to demonstrate that the criteria in paragraph (b)(6)(1) of this section have been met shall be reported as specified in paragraph (b)(6)(1)(i) of this section. Paragraph (b)(6)(1)(i) of this section defines engineering assessment, for the purposes of estimating emissions from a batch emissions episode. All data, assumptions, and procedures used in an engineering assessment shall be documented.

(1) If the criteria specified in paragraph (b)(6)(1)(A), (B), or (C) are met for a specific batch emission episode, the owner or operator may use engineering assessment, as described in paragraph (b)(6)(1)(i) of this section, to estimate emissions from that batch emission episode, and the owner or operator is not required to use the emissions estimation equations described in paragraphs (b)(1) through (b)(4) of this section to estimate emissions from that batch emission episode.

(A) Previous test data, where the measurement of organic HAP or TOC emissions was an outcome of the test, show a greater than 20 percent discrepancy between the test value and the value estimated using the applicable equations in paragraphs (b)(1) through (b)(4) of this section. Paragraphs (b)(6)(1)(A)(1) and (2) of this section describe test data that will be acceptable under this paragraph (b)(6)(1)(A).

(1) Test data for the batch emission episode obtained during production of the product for which the demonstration is being made.

(2) Test data obtained for a batch emission episode from another process train, where the test data were obtained during production of the product for which the demonstration is being made. Test data from another process train may be used only if the owner or operator can demonstrate that the data are representative of the batch emission episode for which the demonstration is being made, taking into account the nature, size, operating conditions, production rate, and sequence of process steps (e.g., reaction, distillation, etc.) of the equipment in the other process train.

(B) Previous test data obtained during the production of the product for which the demonstration is being made, for the batch emission episode with the highest organic HAP emissions on a mass basis, show a greater than 20 percent discrepancy between the test value and the value estimated using the applicable equations in paragraphs (b)(1) through (b)(4) of this section. If the criteria in this paragraph (b)(6)(1)(B) are met, then engineering assessment may be used for all batch emission episodes associated with that batch cycle for that batch unit operation.

(C) The owner or operator has requested approval to use engineering assessment to estimate emissions from a batch emissions episode. The request to use engineering assessment to estimate emissions from a batch emissions episode shall contain sufficient information and data to demonstrate to the Administrator that engineering assessment is an accurate means of estimating emissions for that particular batch emissions episode. The request to use engineering assessment to estimate emissions for a batch emissions episode shall be submitted in the Precompliance Report required under §63.506(e)(3).

(i) Engineering assessment includes, but is not limited to, the following:

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

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

(C) Flow rate, TOC emission rate, or organic HAP emission rate specified or implied within a permit limit applicable to the batch front-end 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;

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

(3) Estimation of TOC or organic HAP concentrations based on saturation conditions; and

(4) Estimation of TOC or organic HAP concentrations based on grab samples of the liquid or vapor.

(iii) Data or other information used to demonstrate that the criteria in paragraph (b)(6)(1) of this section have been met shall be reported as specified in paragraphs (b)(6)(iii)(A) and (b)(6)(iii)(B) of this section.

(A) Data or other information used to demonstrate that the criteria in paragraph (b)(6)(1)(A) or (b)(6)(1)(B) of this section have been met shall be reported in the Notification of Compliance Status, as required in §63.492(a)(6).

(B) The request for approval to use engineering assessment to estimate emissions from a batch emissions episode as allowed under paragraph (b)(6)(1)(C) of this section, and sufficient data or other information for demonstrating to the Administrator that engineering assessment is an accurate means of estimating emissions for that particular batch emissions episode shall be submitted with the Precompliance Report, as required in §63.506(e)(3).

(7) For each batch front-end process vent, the TOC or organic HAP emissions associated with a single batch cycle shall be calculated using Equation 11.

$$E_{\text{cycle}} = \sum_{i=1}^n E_{\text{episode}_i} \quad [\text{Eq. 11}]$$

where:



$E_{cycle}$  = Emissions for an individual batch cycle, kg/batch cycle.

$E_{episode}$  = Emissions from a batch emission episode  $i$ , kg/episode.

$n$  = Number of batch emission episodes for the batch cycle.

(8) Annual TOC or organic HAP emissions from a batch front-end process vent shall be calculated using Equation 12.

$$AE = \sum_{i=1}^n (N_i)(E_{cycle,i}) \quad [\text{Eq. 12}]$$

where:

AE = Annual emissions from a batch front-end process vent, kg/yr.

$N_i$  = Number of type  $i$  batch cycles performed annually, cycles/year.

$E_{cycle,i}$  = Emissions from the batch front-end process vent associated with single type  $i$  batch cycle, as determined in paragraph (b)(7) of this section, kg/batch cycle.

$n$  = Number of different types of batch cycles that cause the emission of TOC or organic HAP from the batch front-end process vent.

(9) Individual HAP partial pressures in multicomponent systems shall be determined using the appropriate method specified in paragraphs (b)(9)(i) through (b)(9)(iii) of this section.

(i) If the components are miscible, use Raoult's law to calculate the partial pressures;

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

(iii) If Raoult's law or Henry's law are not appropriate or available, the owner or operator may use any of the options in paragraphs (b)(9)(iii)(A), (B), or (C) of this section.

(A) Experimentally obtained activity coefficients, Henry's law constants, or solubility data;

(B) Models, such as group-contribution models, to predict activity coefficients; or

(C) 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.

(c) [Reserved]

(d) *Minimum emission level exemption.* A batch front-end process vent with annual emissions of TOC or organic HAP less than 11,800 kg/yr is considered a Group 2 batch front-end process vent

and the owner or operator of that batch front-end process vent shall comply with the requirements in § 63.487(f) or (g). Annual emissions of TOC or organic HAP are determined at the exit of the batch unit operation, as described in paragraph (a)(2) of this section, and are determined as specified in paragraph (b) of this section. The owner or operator of that batch front-end process vent is not required to comply with the provisions in paragraphs (e) through (g) of this section.

(e) *Determination of average batch vent flow rate and annual average batch vent flow rate.* The owner or operator shall determine the average batch vent flow rate for each batch emission episode in accordance with one of the procedures provided in paragraphs (e)(1) through (e)(2) of this section. The annual average batch vent flow rate for a batch front-end process vent shall be calculated as specified in paragraph (e)(3) of this section.

(1) Determination of the average batch vent flow rate for a batch emission episode by direct measurement shall be made using the procedures specified in paragraphs (e)(1)(i) through (e)(1)(iii) of this section.

(i) The vent stream volumetric flow rate (FR<sub>*i*</sub>) for a batch emission episode, in scmm at 20 °C, shall be determined using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

(ii) The volumetric flow rate of a representative batch emission episode shall be measured every 15 minutes.

(iii) The average batch vent flow rate for a batch emission episode shall be calculated using Equation 13.

$$AFR_{episode} = \frac{\sum_{i=1}^n FR_i}{n} \quad [\text{Eq. 13}]$$

Where:

AFR<sub>episode</sub> = Average batch vent flow rate for the batch emission episode, scmm.

FR<sub>*i*</sub> = Flow rate for individual measurement  $i$ , scmm.

$n$  = Number of flow rate measurements taken during the batch emission episode.

(2) The average batch vent flow rate for a batch emission episode may be determined by engineering assessment, as defined in paragraph (b)(6)(i) of this

section. All data, assumptions, and procedures used shall be documented.

(3) The annual average batch vent flow rate for a batch front-end process

vent shall be calculated using Equation 14.

$$AFR = \frac{\sum_{i=1}^n (DUR_i)(AFR_{episode, i})}{\sum_{i=1}^n (DUR_i)} \quad [\text{Eq. 14}]$$

Where:

AFR = Annual average batch vent flow rate for the batch front-end process vent, scmm.

DUR<sub>i</sub> = Duration of type i batch emission episodes annually, hr/yr.

AFR<sub>episode, i</sub> = Average batch vent flow rate for type i batch emission episode, scmm.

n = Number of types of batch emission episodes venting from the batch front-end process vent.

(f) *Determination of cutoff flow rate.* For each batch front-end process vent, the owner or operator shall calculate the cutoff flow rate using Equation 15.

$$CFR = (0.00437)(AE) - 51.6 \quad [\text{Eq. 15}]$$

where:

CFR = Cutoff flow rate, scmm.

AE = Annual TOC or organic HAP emissions, as determined in paragraph (b)(8) of this section, kg/yr.

(g) *Group 1/Group 2 status determination.* The owner or operator shall compare the cutoff flow rate, calculated in accordance with paragraph (f) of this section, with the annual average batch vent flow rate, determined in accordance with paragraph (e)(3) of this section. The group determination status for each batch front-end process vent shall be made using the criteria specified in paragraphs (g)(1) and (g)(2) of this section.

(1) If the cutoff flow rate is greater than or equal to the annual average batch vent flow rate of the stream, the batch front-end process vent is classified as a Group 1 batch front-end process vent.

(2) If the cutoff flow rate is less than the annual average batch vent flow rate of the stream, the batch front-end

process vent is classified as a Group 2 batch front-end process vent.

(h) *Determination of halogenation status.* To determine whether a batch front-end process vent or an aggregate batch vent stream is halogenated, the annual mass emission rate of halogen atoms contained in organic compounds shall be calculated using the procedures specified in paragraphs (h)(1) through (h)(3) of this section.

(1) The concentration of each organic compound containing halogen atoms (ppmv, by compound) for each batch emission episode shall be determined after the last recovery device (if any recovery devices are present), based on any one of the following procedures:

(i) Process knowledge that no halogens or hydrogen halides are present in the process may be used to demonstrate that a batch emission episode is nonhalogenated. Halogens or hydrogen halides that are unintentionally introduced into the process shall not be considered in making a finding that a batch emission episode is nonhalogenated.

(ii) Engineering assessment as discussed in paragraph (b)(6)(i) of this section.

(iii) Average concentration of organic compounds containing halogens and hydrogen halides as measured by Method 26 or 26A of 40 CFR part 60, appendix A.

(iv) Any other method or data that has been validated according to the applicable procedures in Method 301, 40 CFR part 63, appendix A.

(2) The annual mass emissions of halogen atoms for a batch front-end process vent shall be calculated using Equation 16.

$$E_{\text{halogen}} = K \left[ \sum_{j=1}^n \sum_{i=1}^m (C_{\text{avg},j}) (L_{j,i}) (M_{j,i}) \right] \text{AFR} \quad [\text{Eq. 16}]$$

Where:

$E_{\text{halogen}}$  = Mass of halogen atoms, dry basis, kg/yr.

$K$  = Constant,  $0.022 (\text{ppmv})^{-1}$  (kg-mole per scfm) (min/yr), where standard temperature is  $20^\circ\text{C}$ .

AFR = Annual average batch vent flow rate of the batch front-end process vent, determined according to paragraph (e) of this section, scfm.

$M_{j,i}$  = Molecular weight of halogen atom  $i$  in compound  $j$ , kg/kg-mole.

$L_{j,i}$  = Number of atoms of halogen  $i$  in compound  $j$ .

$n$  = Number of halogenated compounds  $j$  in the batch front-end process vent.

$m$  = Number of different halogens  $i$  in each compound  $j$  of the batch front-end process vent.

$C_{\text{avg},j}$  = Annual average batch vent concentration of halogenated compound  $j$  in the batch front-end process vent, as determined by using Equation 17, dry basis, ppmv.

where:

$$C_{\text{avg},j} = \frac{\sum_{i=1}^n (\text{DUR}_i)(C_i)}{\sum_{i=1}^n (\text{DUR}_i)} \quad [\text{Eq. 17}]$$

Where:

$\text{DUR}_i$  = Duration of type  $i$  batch emission episodes annually, hr/yr.

$C_i$  = Average batch vent concentration of halogenated compound  $j$  in type  $i$  batch emission episode, ppmv.

$n$  = Number of types of batch emission episodes venting from the batch front-end process vent.

(3) The annual mass emissions of halogen atoms for an aggregate batch vent stream shall be the sum of the annual mass emissions of halogen atoms for all batch front-end process vents included in the aggregate batch vent stream.

(1) *Process changes affecting Group 2 batch front-end process vents.* Whenever process changes, as described in paragraph (1)(1) of this section, are made that affect one or more Group 2 batch front-end process vents and that could reasonably be expected to change one

or more Group 2 batch front-end process vents to Group 1 batch front-end process vents or that could reasonably be expected to reduce the batch mass input limitation for one or more Group 2 batch front-end process vents, the owner or operator of the affected source shall comply with paragraphs (1)(2) and (1)(3) of this section.

(1) Examples of process changes include the changes listed in paragraphs (1)(1)(i), (1)(1)(ii), and (1)(1)(iii) of this section.

(i) For all batch front end process vents, examples of process changes include, but are not limited to, changes in feedstock type or catalyst type; or whenever there is replacement, removal, or modification of recovery equipment considered part of the batch unit operation as specified in paragraph (a)(2) of this section; or increases in production capacity or production rate. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; and changes that are within the margin of variation on which the original group determination was based.

(ii) For Group 2 batch front-end process vents where the group determination and batch mass input limitation are based on the expected mix of products, the situations described in paragraphs (1)(1)(ii)(A) and (B) of this section shall be considered to be process changes.

(A) The production of combinations of products not considered in establishing the batch mass input limitation.

(B) The production of a recipe of a product with a total mass of HAP charged to the reactor during the production of a single batch of product that is higher than the total mass of HAP for the recipe used as the single highest-HAP recipe for that product in the batch mass input limitation determination.

(iii) For Group 2 batch front-end process vents where the group determination and batch mass input limitation are based on the single highest-HAP recipe (considering all products produced or processed in the batch unit operation), the production of a recipe having a total mass of HAP charged to the reactor (during the production of a single batch of product) that is higher than the total mass of HAP for the highest-HAP recipe used in the batch mass input limitation determination shall be considered to be a process change.

(2) For each batch front-end process vent affected by a process change, the owner or operator shall redetermine the group status by repeating the procedures specified in paragraphs (b) through (g) of this section, as applicable. Alternatively, engineering assessment, as described in paragraph (b)(6)(i) of this section, may be used to determine the effects of the process change.

(3) Based on the results of paragraph (i)(2) of this section, owners or operators of affected sources shall comply with either paragraph (i)(3)(i), (ii), or (iii) of this section.

(i) If the group redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch front-end process vent has become a Group 1 batch front-end process vent as a result of the process change, the owner or operator of the affected source shall submit a report as specified in § 63.492(b) and shall comply with the Group 1 provisions in §§ 63.487 through 63.492 in accordance with § 63.480(i)(2)(ii) or (i)(2)(iii), as applicable.

(ii) If the redetermination described in paragraph (i)(2) of this section indicates that a Group 2 batch front-end process vent with annual emissions less than the applicable level specified in paragraph (d) of this section, and that is in compliance with § 63.487(g), now has annual emissions greater than or equal to the applicable level specified by paragraph (d) of this section but remains a Group 2 batch front-end process vent, the owner or operator of the affected source shall comply with the provisions in paragraphs (i)(3)(i)(A) through (C) of this section.

(A) Redetermine the batch mass input limitation;

(B) Submit a report as specified in § 63.492(c); and

(C) Comply with § 63.487(f), beginning with the year following the submittal of the report submitted according to paragraph (i)(3)(i)(B) of this section.

(iii) If the group redetermination described in paragraph (i)(2) of this section indicates no change in group status or no change in the relation of annual emissions to the levels specified in paragraph (d) of this section, the owner or operator of the affected source shall comply with paragraphs (i)(3)(iii)(A) and (i)(3)(iii)(B) of this section.

(A) The owner or operator shall redetermine the batch mass input limitation; and

(B) The owner or operator shall submit the new batch mass input limitation in accordance with § 63.492(c).

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11542, Mar. 9, 1999; 65 FR 28054, June 19, 2000]

**§ 63.489 Batch front-end process vents—monitoring equipment.**

(a) *General requirements.* Each owner or operator of a batch front-end process vent or aggregate batch vent stream that uses a control device to comply with the requirements in § 63.487(a)(2) or § 63.487(b)(2) shall install the monitoring equipment specified in paragraph (b) of this section. All monitoring equipment shall be installed, calibrated, maintained, and operated according to the manufacturer's specifications or other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(1) This monitoring equipment shall be in operation at all times when batch emission episodes, or portions thereof, that the owner or operator has selected to control are vented to the control device, or at all times when an aggregate batch vent stream is vented to the control device.

(2) Except as otherwise provided in this subpart, the owner or operator shall operate control devices such that the daily average of monitored parameters, established as specified in paragraph (e) of this section, remains above

the minimum level or below the maximum level, as appropriate.

(b) *Batch front-end process vent and aggregate batch vent stream monitoring equipment.* The monitoring equipment specified in paragraphs (b)(1) through (b)(8) of this section shall be installed as specified in paragraph (a) of this section. The parameters to be monitored are specified in Table 6 of this subpart.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(1) Where a catalytic incinerator is used, temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, a device (including, but not limited to, a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all batch front-end process vents or aggregate batch vent streams are introduced with the primary fuel or are used as the primary fuel is exempt from this requirement.

(4) Where a scrubber is used with an incinerator, boiler, or process heater in concert with the combustion of halogenated batch front-end process vents or halogenated aggregate batch vent streams, the following monitoring equipment is required for the scrubber:

(1) A pH monitoring device equipped with a continuous recorder to monitor the pH of the scrubber effluent; and

(ii) A flow measurement device equipped with a continuous recorder shall be located at the scrubber influent for liquid flow. Gas stream flow shall be determined using one of the procedures specified in paragraphs

(b)(4)(ii)(A) through (b)(4)(ii)(C) of this section.

(A) The owner or operator may determine gas stream flow using the design blower capacity, with appropriate adjustments for pressure drop.

(B) If the scrubber is subject to regulations in 40 CFR parts 264 through 266 that have required a determination of the liquid to gas (L/G) ratio prior to the applicable compliance date for this subpart, the owner or operator may determine gas stream flow by the method that had been utilized to comply with those regulations. A determination that was conducted prior to the compliance date for this subpart may be utilized to comply with this subpart if it is still representative.

(C) The owner or operator may prepare and implement a gas stream flow determination plan that documents an appropriate method which will be used to determine the gas stream flow. The plan shall require determination of gas stream flow by a method which will at least provide a value for either a representative or the highest gas stream flow anticipated in the scrubber during representative operating conditions. The plan shall include a description of the methodology to be followed and an explanation of how the selected methodology will reliably determine the gas stream flow, and a description of the records that will be maintained to document the determination of gas stream flow. The owner or operator shall maintain the plan as specified in § 63.506(a).

(5) Where an absorber is used, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(6) Where a condenser is used, a condenser exit temperature (product side) monitoring device equipped with a continuous recorder is required.

(7) Where a carbon adsorber is used, an integrating regeneration steam flow, nitrogen flow, or pressure monitoring device having an accuracy of  $\pm 10$  percent of the flow rate, level, or pressure, or better, capable of recording the total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) for each regeneration cycle; and a

carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(8) As an alternate to paragraphs (b)(5) through (b)(7) of this section, the owner or operator may install an organic monitoring device equipped with a continuous recorder.

(c) *Alternative monitoring parameters.* An owner or operator of a batch front-end process vent or aggregate batch vent stream may request approval to monitor parameters other than those required by paragraph (b) of this section. The request shall be submitted according to the procedures specified in §63.492(e) and §63.506(f). Approval shall be requested if the owner or operator:

(1) Uses a control device other than those included in paragraph (b) of this section; or

(2) Uses one of the control devices included in paragraph (b) of this section, but seeks to monitor a parameter other than those specified in Table 6 of this subpart and paragraph (b) of this section.

(d) *Monitoring of bypass lines.* The owner or operator of a batch front-end process vent or aggregate batch vent stream using a vent system that contains bypass lines that could divert emissions away from a control device used to comply with §63.487(a) or §63.487(b) shall comply with either paragraph (d)(1) or (d)(2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph (d).

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in §63.491(e)(3). The flow indicator shall be installed at the entrance to any bypass line that could divert emissions away from the control device and to the atmosphere; or

(2) Secure the bypass line damper or valve in the non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to

ensure that the damper or valve is maintained in the non-diverting position and emissions are not diverted through the bypass line. Records shall be generated as specified in §63.491(e)(4).

(e) *Establishment of parameter monitoring levels.* Parameter monitoring levels for batch front-end process vents and aggregate batch vent streams shall be established as specified in paragraphs (e)(1) through (e)(3) of this section.

(1) For each parameter monitored under paragraph (b) or (c) of this section, the owner or operator shall establish a level, defined as either a maximum or minimum operating parameter as denoted in Table 7 of this subpart, that indicates proper operation of the control device. The level shall be established in accordance with the procedures specified in §63.505. The level may be based upon a prior performance test conducted for determining compliance with a regulation promulgated by the EPA, and the owner or operator is not required to conduct a performance test under §63.490, provided that the prior performance test meets the conditions of §63.490(b)(3).

(1) For batch front-end process vents using a control device to comply with §63.487(a)(2), the established level shall reflect the control efficiency established as part of the initial compliance demonstration specified in §63.490(c)(2).

(ii) For aggregate batch vent streams using a control device to comply with §63.487(b)(2), the established level shall reflect the emission reduction requirement of either 90 percent or 20 ppmv specified in §63.487(b)(2).

(2) The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application as required in §63.506(c)(5) or §63.506(e)(8), respectively.

(3) The operating day shall be defined as part of establishing the parameter monitoring level and shall be submitted with the information in paragraph (e)(2) of this section. The definition of operating day shall specify the

time(s) at which an operating day begins and ends. The operating day shall not exceed 24 hours.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38059, June 19, 2000; 66 FR 36928, July 16, 2001; 76 FR 22589, Apr. 21, 2011]

**§ 63.490 Batch front-end process vents—performance test methods and procedures to determine compliance.**

(a) *Use of a flare.* When a flare is used to comply with § 63.487(a)(1) or § 63.487(b)(1), the owner or operator of an affected source shall comply with § 63.504(c).

(b) *Exceptions to performance tests.* An owner or operator is not required to conduct a performance test when a control device specified in paragraphs (b)(1) through (b)(5) of this section is used to comply with § 63.487(a)(2).

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

(2) A boiler or process heater where the vent stream is introduced with the primary fuel or is used as the primary fuel.

(3) A control device for which a performance test was conducted for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same Methods specified in this section and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

(4) 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.

(5) 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.

(c) *Batch front-end process vent testing and procedures for compliance with § 63.487(a)(2).* Except as provided in paragraph (a) or (b) of this section, an owner or operator using a control device to comply with § 63.487(a)(2) shall conduct a performance test using the procedures specified in paragraph (c)(1) of this section in order to determine the control efficiency of the control device. An owner or operator shall determine the percent reduction for the batch cycle using the control efficiency of the control device as specified in paragraphs (c)(2)(1) through (c)(2)(iii) of this section and the procedures specified in paragraph (c)(2) of this section. Compliance may be based on either total organic HAP or TOC. For purposes of this paragraph (c), the term "batch emission episode" shall have the meaning "period of the batch emission episode selected for control," which may be the entire batch emission episode or may only be a portion of the batch emission episode.

(1) Performance tests shall be conducted as specified in paragraphs (c)(1)(i) through (c)(1)(v) of this section.

(i) Except as specified in paragraph (c)(1)(i)(A) of this section, a test shall be performed for the entire period of each batch emission episode in the batch cycle that the owner or operator selects to control as part of achieving the required 90 percent emission reduction for the batch cycle specified in § 63.487(a)(2). Only one test is required for each batch emission episode selected by the owner or operator for control. The owner or operator shall follow the procedures listed in paragraphs (c)(1)(i)(B) through (c)(1)(i)(D) of this section.

(A) Alternatively, an owner or operator may choose to test only those periods of the batch emission episode during which the emission rate for the entire episode can be determined or during which the emissions are greater than the average emission rate of the batch emission episode. The owner or operator choosing either of these options shall develop an emission profile for the entire batch emission episode, based on either process knowledge or test data collected, to demonstrate

that test periods are representative. Examples of information that could constitute process knowledge include calculations based on material balances and process stoichiometry. Previous test results may be used, provided the results are still relevant to the current batch front-end process vent conditions.

(B) Method 1 or 1A, 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites if the flow measuring device is a pitot tube, except that references to particulate matter in Method 1A do not apply for the purposes of this subpart. No traverse is necessary when Method 2A or 2D, 40 CFR part 60, appendix A is used to determine gas stream volumetric flow rate. Inlet sampling sites shall be located as specified in paragraphs (c)(1)(i)(B)(1) and (c)(1)(i)(B)(2) of this section. Outlet sampling sites shall be located at the outlet of the final control device prior to release to the atmosphere.

(1) The control device inlet sampling site shall be located at the exit from the batch unit operation before any control device. Section 63.488(a)(2) describes those recovery devices considered part of the unit operation. Inlet sampling sites would be after these specified recovery devices.

(2) If a batch process vent is introduced with the combustion air or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, selection of the location of the inlet sampling sites shall ensure the measurement of total organic HAP or TOC (minus methane and ethane)

concentrations in all batch front-end process vents and primary and secondary fuels introduced into the boiler or process heater.

(C) Gas stream volumetric flow rate and/or average batch vent flow rate shall be determined as specified in §63.488(e).

(D) Method 18 or Method 25A of 40 CFR part 60, appendix A, shall be used to determine the concentration of organic HAP or TOC, as appropriate. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301, 40 CFR part 63, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (c)(1)(i)(D)(1) and (c)(1)(i)(D)(2) of this section.

(1) 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 of the emissions.

(2) 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.

(ii) If an integrated sample is taken over the entire batch emission episode to determine the average batch vent concentration of TOC or total organic HAP, emissions per batch emission episode shall be calculated using Equations 18 and 19.

$$E_{\text{episode, inlet}} = K \left| \sum_{j=1}^n (C_{j, \text{inlet}})(M_j) \right| (AFR_{\text{inlet}})(T_h) \quad [\text{Eq. 18}]$$

$$E_{\text{episode, outlet}} = K \left| \sum_{j=1}^n (C_{j, \text{outlet}})(M_j) \right| (AFR_{\text{outlet}})(T_h) \quad [\text{Eq. 19}]$$

Where:

$E_{\text{episode}}$  = Inlet or outlet emissions, kg/episode.

$K$  = Constant,  $2.494 \times 10^{-6}$  (ppmv)<sup>-1</sup> (gm-mole/secm) (kg/gm) (min/hr), where standard temperature is 20 °C.

$C_j$  = Average inlet or outlet concentration of TOC or sample organic HAP component  $j$



of the gas stream for the batch emission episode, dry basis, ppmv.  
 M<sub>j</sub> = Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.  
 AFR = Average inlet or outlet flow rate of gas stream for the batch emission episode, dry basis, scmm.  
 T<sub>b</sub> = Hours/episode.  
 n = Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated using a

TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.  
 (iii) If grab samples are taken to determine the average batch vent concentration of TOC or total organic HAP, emissions shall be calculated according to paragraphs (c)(1)(iii)(A) and (c)(1)(iii)(B) of this section.  
 (A) For each measurement point, the emission rates shall be calculated using Equations 20 and 21.

$$E_{\text{point, inlet}} = K \left[ \sum_{j=1}^n C_j M_j \right] FR_{\text{inlet}} \quad [\text{Eq. 20}]$$

$$E_{\text{point, outlet}} = K \left[ \sum_{j=1}^n C_j M_j \right] FR_{\text{outlet}} \quad [\text{Eq. 21}]$$

Where:  
 E<sub>point</sub> = Inlet or outlet emission rate for the measurement point, kg/hr.  
 K = Constant, 2.494 × 10<sup>-6</sup> (ppmv)<sup>-1</sup> (gm-mole·scm) (kg/gm) (min/hr), where standard temperature is 20 °C.  
 C<sub>j</sub> = Inlet or outlet concentration of TOC or sample organic HAP component j of the gas stream, dry basis, ppmv.  
 M<sub>j</sub> = Molecular weight of TOC or sample organic HAP component j of the gas stream, gm/gm-mole.  
 FR = Inlet or outlet flow rate of gas stream for the measurement point, dry basis, scmm.  
 n = Number of organic HAP in stream. Note: Summation is not applicable if TOC emissions are being estimated using a TOC concentration measured using Method 25A, 40 CFR part 60, appendix A.

(B) The emissions per batch emission episode shall be calculated using Equations 22 and 23.

$$E_{\text{episode, inlet}} = (\text{DUR}) \left[ \sum_{i=1}^n \frac{E_{\text{point, inlet, i}}}{n} \right] \quad [\text{Eq. 22}]$$

$$E_{\text{episode, outlet}} = (\text{DUR}) \left[ \sum_{i=1}^n \frac{E_{\text{point, outlet, i}}}{n} \right] \quad [\text{Eq. 23}]$$

where:  
 E<sub>episode</sub> = Inlet or outlet emissions, kg/episode.  
 DUR = Duration of the batch emission episode, hr/episode.

E<sub>point, i</sub> = Inlet or outlet emissions for measurement point i, kg/hr.  
 n = Number of measurements.  
 (iv) The control efficiency for the control device shall be calculated using Equation 24.

$$R = \frac{\sum_{i=1}^n E_{\text{inlet, i}} - \sum_{i=1}^n E_{\text{outlet, i}}}{\sum_{i=1}^n E_{\text{inlet, i}}} \quad (100) \quad [\text{Eq. 24}]$$

Where:  
 R = Control efficiency of control device, percent.  
 E<sub>inlet, i</sub> = Mass rate of TOC or total organic HAP for batch emission episode i at the inlet to the control device as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.  
 E<sub>outlet, i</sub> = Mass rate of TOC or total organic HAP for batch emission episode i at the outlet of the control device, as calculated under paragraph (c)(1)(ii) or (c)(1)(iii) of this section, kg/hr.  
 n = Number of batch emission episodes in the batch cycle selected to be controlled.

(v) If the batch front-end process vent entering a boiler or process heater with a design capacity less than 44 megawatts is introduced with the combustion air or as a secondary fuel, the weight-percent reduction of total organic HAP or TOC across the device

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shall be determined by comparing the TOC or total organic HAP in all combusted batch front-end process vents and primary and secondary fuels with the TOC or total organic HAP, respectively, exiting the combustion device.

(2) The percent reduction for the batch cycle shall be determined using Equation 25 and the control device efficiencies specified in paragraphs (c)(2)(1)

through (c)(2)(iii) of this section. All information used to calculate the batch cycle percent reduction, including a definition of the batch cycle identifying all batch emission episodes, shall be recorded as specified in §63.491(b)(2). This information shall include identification of those batch emission episodes, or portions thereof, selected for control.

$$\text{Percent Reduction} = \frac{\sum_{i=1}^n E_{\text{unc}} + \sum_{i=1}^n E_{\text{inlet, con}} - \sum_{i=1}^n (1 - R)(E_{\text{inlet, con}})}{\sum_{i=1}^n E_{\text{unc}} - \sum_{i=1}^n E_{\text{inlet, con}}} 100 \quad [\text{Eq. 25}]$$

Where:

$E_{\text{unc}}$  = Mass rate of TOC or total organic HAP for uncontrolled batch emission episode  $i$ , kg/hr.

$E_{\text{inlet, con}}$  = Mass rate of TOC or total organic HAP for controlled batch emission episode  $i$  at the inlet to the control device, kg/hr.

$R$  = Control efficiency of control device as specified in paragraphs (c)(2)(1) through (c)(2)(iii) of this section.

$n$  = Number of uncontrolled batch emission episodes, controlled batch emission episodes, and control devices. The value of  $n$  is not necessarily the same for these three items.

(i) If a performance test is required by paragraph (c) of this section, the control efficiency of the control device shall be as determined in paragraph (c)(1)(iv) of this section.

(ii) If a performance test is not required by paragraph (c) of this section for a combustion control device, as specified in paragraph (b) of this section, the control efficiency of the control device shall be 98 percent. The control efficiency for a flare shall be 98 percent.

(iii) If a performance test is not required by paragraph (c) of this section for a noncombustion control device, the control efficiency shall be determined by the owner or operator based on engineering assessment.

(d) *Batch process vent and aggregate batch vent stream testing for compliance with §63.487(c) [halogenated emission streams].* An owner or operator control-

ling halogenated emissions in compliance with §63.487(c) shall conduct a performance test to determine compliance with the control efficiency specified in §63.487(c)(1) or the emission limit specified in §63.487(c)(2) for hydrogen halides and halogens.

(1) Sampling sites shall be located at the inlet and outlet of the scrubber or other halogen reduction device used to reduce halogen emissions in complying with §63.487(c)(1) or at the outlet of the halogen reduction device used to reduce halogen emissions in complying with §63.487(c)(2).

(2) The mass emissions of each hydrogen halide and halogen compound for the batch cycle or aggregate batch vent stream shall be calculated from the measured concentrations and the gas stream flow rate(s) determined by the procedures specified in paragraphs (d)(2)(1) and (d)(2)(ii) of this section, except as specified in paragraph (d)(5) of this section.

(1) Method 26 or Method 26A of 40 CFR part 60, appendix A, shall be used to determine the concentration, in Mg per dry scm, of total hydrogen halides and halogens present in the emissions stream.

(ii) Gas stream volumetric flow rate and/or average batch vent flow rate shall be determined as specified in §63.488(e).

(3) To determine compliance with the percent reduction specified in §63.487(c)(1), the mass emissions for

any hydrogen halides and halogens present at the inlet of the scrubber or other halogen reduction device shall be summed together. The mass emissions of any hydrogen halides or halogens present at the outlet of the scrubber or other halogen reduction device shall be summed together. Percent reduction shall be determined by subtracting the outlet mass emissions from the inlet mass emissions and then dividing the result by the inlet mass emissions and multiplying by 100.

(4) To determine compliance with the emission limit specified in § 63.487(c)(2), the annual mass emissions for any hydrogen halides and halogens present at the outlet of the halogen reduction device and prior to any combustion device shall be summed together and compared to the emission limit specified in § 63.487(c)(2).

(5) The owner or operator may use any other method to demonstrate compliance if the method or data has been validated according to the applicable procedures of Method 301, 40 CFR part 63, appendix A.

(e) *Aggregate batch vent stream testing for compliance with § 63.487(b)(2).* Except as specified in paragraphs (e)(1) through (e)(3) of this section, owners or operators of aggregate batch vent streams complying with § 63.487(b)(2) shall conduct a performance test using the performance testing procedures for continuous front-end process vents in § 63.116(c).

(1) For the purposes of this subpart, when the provisions of § 63.116(c) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) 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 of the emissions.

(ii) 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 instru-

ment is zeroed on the most sensitive scale.

(2) When § 63.116(c)(4) refers to complying with an emission reduction of 98 percent, for the purposes of this subpart, the 90 percent reduction requirement specified in § 63.487(b)(2) shall apply.

(3) When a combustion device is used to comply with the 20 parts per million by volume outlet concentration standard specified in § 63.487(b)(2), the correction to 3 percent oxygen specified in the performance testing procedures of § 63.116(c)(3) and (c)(3)(iii) is only required when supplemental combustion air is used to combust the emissions, for the purposes of this subpart.

(f) *Batch mass input limitation.* The batch mass input limitation required by § 63.487(g)(1) shall be determined by the owner or operator such that annual emissions for the batch front-end process vent remain less than the level specified in § 63.488(d). The batch mass input limitation required by § 63.487(f)(1) shall be determined by the owner or operator such that annual emissions remain at a level that ensures that the batch front-end process vent remains a Group 2 batch front-end process vent, given the actual annual flow rate for that batch front-end process vent determined according to § 63.488(e)(3). The batch mass input limitation shall be determined using the same basis, as described in § 63.488(a)(1), used to make the group determination (i.e., expected mix of products or highest-HAP recipe). The establishment of the batch mass input limitation is not dependent upon any past production or activity level.

(1) If the expected mix of products serves as the basis for the batch mass input limitation, the batch mass input limitation shall be determined based on any foreseeable combination of products that the owner or operator expects to manufacture.

(2) If the single highest-HAP recipe serves as the basis for the batch mass input limitation, the batch mass input limitation shall be determined based solely on the production of the single highest-HAP recipe, considering all

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products produced or processed in the batch unit operation.

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11542, Mar. 9, 1999; 65 FR 38060, June 19, 2000]

### § 63.491 Batch front-end process vents—recordkeeping requirements.

(a) *Group determination records for batch front-end process vents.* Except as provided in paragraphs (a)(7) and (a)(8) of this section, each owner or operator of an affected source shall maintain the records specified in paragraphs (a)(1) through (a)(6) of this section for each batch front-end process vent subject to the group determination procedures of § 63.488. Except for paragraph (a)(1) of this section, the records required to be maintained by this paragraph are limited to the information developed and used to make the group determination under §§ 63.488(b) through 63.488(g), as appropriate. If an owner or operator did not need to develop certain information (e.g., annual average batch vent flow rate) to determine the group status, this paragraph does not require that additional information be developed. Paragraph (a)(9) of this section specifies the recordkeeping requirements for Group 2 batch front-end process vents that are exempt from the batch mass input limitation provisions, as allowed under § 63.487(h).

(1) An identification of each unique product that has emissions from one or more batch emission episodes venting from the batch front-end process vent, along with an identification of the single highest-HAP recipe for each product and the mass of HAP fed to the reactor for that recipe.

(2) A description of, and an emission estimate for, each batch emission episode, and the total emissions associated with one batch cycle, as described in either paragraph (a)(2)(i) or (a)(2)(ii) of this section, as appropriate.

(i) If the group determination is based on the expected mix of products, records shall include the emission estimates for the single highest-HAP recipe of each unique product identified in paragraph (a)(1) of this section that was considered in making the group determination under § 63.488.

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(ii) If the group determination is based on the single highest-HAP recipe (considering all products produced or processed in the batch unit operation), records shall include the emission estimates for the single highest-HAP recipe.

(3) Total annual uncontrolled TOC or organic HAP emissions, determined at the exit from the batch unit operation before any emission control, as determined in accordance with § 63.488(b).

(i) For Group 2 batch front-end process vents, emissions shall be determined at the batch mass input limitation.

(ii) For Group 1 batch front-end process vents, emissions shall be those used to determine the group status of the batch front-end process vent.

(4) The annual average batch vent flow rate for the batch front-end process vent as determined in accordance with § 63.488(e).

(5) The cutoff flow rate, determined in accordance with § 63.488(f).

(6) The results of the batch front-end process vent group determination, conducted in accordance with § 63.488(g).

(7) If a batch front-end process vent is subject to § 63.487(a) or § 63.487(b), none of the records in paragraphs (a)(1) through (a)(6) of this section are required.

(8) If the total annual emissions from the batch front-end process vent during the group determination are less than the appropriate level specified in § 63.488(d), only the records in paragraphs (a)(1) through (a)(3) of this section are required.

(9) For each Group 2 batch front-end process vent that is exempt from the batch mass input limitation provisions because it meets the criteria of § 63.487(h), the records specified in paragraphs (a)(9)(i) and (ii) shall be maintained.

(i) Documentation of the maximum design capacity of the EPPU; and

(ii) The mass of HAP or material that can be charged annually to the batch unit operation at the maximum design capacity.

(b) *Compliance demonstration records.* Each owner or operator of a batch front-end process vent or aggregate batch vent stream complying with

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§ 63.487(a) or (b), shall keep the following records, as applicable, readily accessible:

(1) The annual mass emissions of halogen atoms in the batch front-end process vent or aggregate batch vent stream determined according to the procedures specified in § 63.488(h).

(2) If the owner or operator of a batch front-end process vent has chosen to comply with § 63.487(a)(2), records documenting the batch cycle percent reduction as specified in § 63.490(c)(2).

(3) When using a flare to comply with § 63.487(a)(1):

(i) The flare design (i.e., steam-assisted, air-assisted, or non-assisted);

(ii) All visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination required by § 63.504(c); and

(iii) Periods when all pilot flames were absent.

(4) The following information when using a control device to meet the percent reduction requirement specified in § 63.487 (a)(2) or (b)(2):

(i) For an incinerator or non-combustion control device, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.490(c) for batch front-end process vents and § 63.490(e) for aggregate batch vent streams:

(ii) For a boiler or process heater, a description of the location at which the vent stream is introduced into the boiler or process heater;

(iii) For a boiler or process heater with a design heat input capacity of less than 44 megawatts and where the process vent stream is introduced with combustion air or is used as a secondary fuel and is not mixed with the primary fuel, the percent reduction of organic HAP or TOC achieved, as determined using the procedures specified in § 63.490(c) for batch front-end process vents and § 63.490(e) for aggregate batch vent streams; and

(iv) For a scrubber or other halogen reduction device following a combustion device to control halogenated batch front-end process vents or halogenated aggregate batch vent streams, the percent reduction of total hydrogen halides and halogens, as determined

under § 63.490(d)(3) or the emission limit determined under § 63.490(d)(4).

(5) When complying with the 20 parts per million by volume outlet concentration standard specified in § 63.487(b)(2), records of the outlet concentration of organic HAP or TOC on a dry basis. If supplemental combustion air is used to combust the emissions, the outlet concentration shall be corrected to 3 percent oxygen. If supplemental combustion air is not used, a correction to 3 percent oxygen is not required.

(c) *Establishment of parameter monitoring level records.* For each parameter monitored according to § 63.489(b) and Table 6 of this subpart, or for alternate parameters and/or parameters for alternate control devices monitored according to § 63.492(e) as allowed under § 63.489(c), maintain documentation showing the establishment of the level that indicates proper operation of the control device as required by § 63.489(e) for parameters specified in § 63.489(b) and as required by § 63.506(f) for alternate parameters. This documentation shall include the parameter monitoring data used to establish the level.

(d) *Group 2 batch front-end process vent continuous compliance records.* The owner or operator of a Group 2 batch front-end process vent shall comply with either paragraph (d)(1) or (d)(2) of this section, as appropriate.

(1) The owner or operator of a Group 2 batch front-end process vent required to comply with § 63.487(g) shall keep the following records readily accessible:

(i) Records designating the established batch mass input limitation required by § 63.487(g)(1) and specified in § 63.490(f).

(ii) Records specifying the mass of HAP or material charged to the batch unit operation.

(2) The owner or operator of a Group 2 batch front-end process vent complying with § 63.487(f) shall keep the following records readily accessible:

(i) Records designating the established batch mass input limitation required by § 63.487(f)(1) and specified in § 63.490(f).

(ii) Records specifying the mass of HAP or material charged to the batch unit operation.

(e) *Controlled batch front-end process vent continuous compliance records.* Each owner or operator of a batch front-end process vent that has chosen to use a control device to comply with § 63.487(a) shall keep the following records readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.489(b) as applicable, and listed in Table 6 of this subpart, or specified by the Administrator in accordance with § 63.492(e) as allowed under § 63.489(c). These records shall be kept as specified under § 63.506(d), except as specified in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) For flares, the records specified in Table 6 of this subpart shall be maintained in place of continuous records.

(ii) For carbon adsorbers, the records specified in Table 6 of this subpart shall be maintained in place of batch cycle daily averages.

(2) Records of the batch cycle daily average value of each continuously monitored parameter, except as provided in paragraphs (e)(2)(iii) of this section, as calculated using the procedures specified in paragraphs (e)(2)(i) and (e)(2)(ii) of this section.

(i) The batch cycle daily average shall be calculated as the average of all parameter values measured for an operating day during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has selected to control.

(ii) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments shall not be included in computing the batch cycle daily averages. In addition, monitoring data recorded during periods of non-operation of the EPPU (or specific portion thereof) resulting in cessation of organic HAP emissions shall not be included in computing the batch cycle daily averages.

(iii) If all recorded values for a monitored parameter during an operating day are above the minimum or below the maximum level established in accordance with § 63.489(e), the owner or operator may record that all values were above the minimum or below the maximum level established, rather than calculating and recording a batch

cycle daily average for that operating day.

(3) Hourly records of whether the flow indicator for bypass lines specified under § 63.489(d)(1) was operating and whether a diversion was detected at any time during the hour. Also, records of the times of all periods when the vent is diverted from the control device, or the flow indicator specified in § 63.489(d)(1) is not operating.

(4) Where a seal or closure mechanism is used to comply with § 63.489(d)(2), hourly records of whether a diversion was detected at any time are not required.

(i) For compliance with § 63.489(d)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanism has been done, and shall record the occurrence of all periods when the seal mechanism is broken, the bypass line damper or valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has been broken.

(ii) [Reserved]

(5) Records specifying the times and duration of periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high level adjustments. In addition, records specifying any other periods of process or control device operation when monitors are not operating.

(f) *Aggregate batch vent stream continuous compliance records.* In addition to the records specified in paragraphs (b) and (c) of this section, each owner or operator of an aggregate batch vent stream using a control device to comply with § 63.487(b)(1) or (b)(2) shall keep the following records readily accessible:

(1) Continuous records of the equipment operating parameters specified to be monitored under § 63.489(b) and listed in Table 6 of this subpart, as applicable, or specified by the Administrator in accordance with § 63.492(e), as allowed under § 63.489(c), with the exceptions listed in paragraphs (f)(1)(i) and (f)(1)(ii) of this section.

(i) For flares, the records specified in Table 6 of this subpart shall be maintained in place of continuous records.

(1) For carbon adsorbers, the records specified in Table 6 of this subpart shall be maintained in place of daily averages.

(2) Records of the daily average value of each continuously monitored parameter for each operating day determined according to the procedures specified in § 63.506(d).

(3) For demonstrating compliance with the monitoring of bypass lines as specified in § 63.489(d), records as specified in paragraph (e)(3) or (e)(4) of this section, as appropriate.

(g) Documentation supporting the establishment of the batch mass input limitation shall include the information specified in paragraphs (g)(1) through (g)(5) of this section, as appropriate.

(1) Identification of whether the purpose of the batch mass input limitation is to comply with § 63.487(f)(1) or (g)(1).

(2) Identification of whether the batch mass input limitation is based on the single highest-HAP recipe (considering all products) or on the expected mix of products for the batch front-end process vent as allowed under § 63.488(a)(1).

(3) Definition of the operating year, for the purposes of determining compliance with the batch mass input limitation.

(4) If the batch mass input limitation is based on the expected mix of products, the owner or operator shall provide documentation that describes as many scenarios for differing mixes of products (i.e., how many of each type of product) as the owner or operator desires the flexibility to accomplish. Alternatively, the owner or operator shall provide a description of the relationship among the mix of products that will allow a determination of compliance with the batch mass input limitation under any number of scenarios.

(5) The mass of HAP or material allowed to be charged to the batch unit operation per year under the batch mass input limitation.

[62 FR 46925, Sept. 5, 1996, as amended at 61 FR 11542, Mar. 9, 1999; 65 FR 38063, June 19, 2000; 76 FR 22589, Apr. 21, 2011]

**§ 63.492 Batch front-end process vents—reporting requirements.**

(a) The owner or operator of a batch front-end process vent or aggregate batch vent stream at an affected source shall submit the information specified in paragraphs (a)(1) through (a)(6) of this section, as appropriate, as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(1) For each batch front-end process vent complying with § 63.487(a) and each aggregate batch vent stream complying with § 63.487(b), the information specified in § 63.491(b) and § 63.491(c), as applicable.

(2) For each Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d), the information specified in § 63.491(d)(1)(i).

(3) For each Group 2 batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d), the information specified in § 63.491(d)(2)(i).

(4) For each batch process vent subject to the group determination procedures, the information specified in § 63.491(a), as appropriate.

(5) For each Group 2 batch front-end process vent that is exempt from the batch mass input limitation provisions because it meets the criteria of § 63.487(h), the information specified in § 63.491(a)(1) through (3), and the information specified in § 63.491(a)(4) through (6) as applicable, calculated at the conditions specified in § 63.487(h).

(6) When engineering assessment has been used to estimate emissions from a batch emissions episode and the criteria specified in § 63.488(b)(6)(i)(A) or (B) have been met, the owner or operator shall submit the information demonstrating that the criteria specified in § 63.488(b)(6)(i)(A) or (B) have been met as part of the Notification of Compliance Status required by § 63.506(e)(5).

(b) Whenever a process change, as defined in § 63.488(i)(1), is made that causes a Group 2 batch front-end process vent to become a Group 1 batch front-end process vent, the owner or operator shall notify the Administrator and submit a description of the process change within 180 days after the process change is made or with the next Periodic Report, whichever is

later. The owner or operator of an affected source shall comply with the Group 1 batch front-end process vent provisions in §§ 63.486 through 63.492 in accordance with § 63.480(i)(2)(ii).

(c) Whenever a process change, as defined in § 63.488(i)(1), is made that causes a Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d) for which the owner or operator is required to comply with § 63.487(g) to have annual emissions greater than or equal to the level specified in § 63.488(d) but remains a Group 2 batch front-end process vent, or if a process change is made that requires the owner or operator to redetermine the batch mass input limitation as specified in § 63.488(i)(3), the owner or operator shall submit a report within 180 days after the process change is made or with the next Periodic Report, whichever is later. The following information shall be submitted:

(1) A description of the process change;

(2) The batch mass input limitation determined in accordance with § 63.487(f)(1).

(d) The owner or operator is not required to submit a report of a process change if one of the conditions specified in paragraphs (d)(1) or (d)(2) of this section is met.

(1) The change does not meet the description of a process change in § 63.488(i).

(2) The redetermined group status remains Group 2 for an individual batch front-end process vent with annual emissions greater than or equal to the level specified in § 63.488(d) and the batch mass input limitation does not decrease, or a Group 2 batch front-end process vent with annual emissions less than the level specified in § 63.488(d) complying with § 63.487(g) continues to have emissions less than the level specified in § 63.488(d) and the batch mass input limitation does not decrease.

(e) If an owner or operator uses a control device other than those specified in § 63.489(b) and listed in Table 6 of this subpart or requests approval to monitor a parameter other than those specified in § 63.489(b) and listed in Table 6 of this subpart, the owner or operator shall submit a description of

planned reporting and recordkeeping procedures, as specified in § 63.506(f), as part of the Precompliance Report as required under § 63.506(e)(3). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report.

(f) Owners or operators of affected sources complying with § 63.489(d), shall comply with paragraph (f)(1) or (f)(2) of this section, as appropriate.

(1) Submit reports of the times of all periods recorded under § 63.491(e)(3) when the batch front-end process vent is diverted away from the control device through a bypass line, with the next Periodic Report.

(2) Submit reports of all occurrences recorded under § 63.491(c)(4) in which the seal mechanism is broken, the bypass line damper or valve position has changed, or the key to unlock the bypass line damper or valve was checked out, with the next Periodic Report.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38065, June 19, 2000]

**§ 63.493 Back-end process provisions.**

Owners and operators of new and existing affected sources shall comply with the requirements in §§ 63.494 through 63.500. Owners and operators of affected sources whose only elastomer products are latex products, liquid rubber products, or products produced in a gas-phased reaction process, are not subject to the provisions of §§ 63.494 through 63.500. If latex or liquid rubber products are produced in an affected source that also produces another elastomer product, the provisions of §§ 63.494 through 63.500 do not apply to the back-end operations dedicated to the production of one or more latex products, or to the back-end operations during the production of a latex product. Table 8 to this subpart contains a summary of compliance alternative requirements for the emission limits in § 63.494(a)(1)-(3) and associated requirements.

[76 FR 22580, Apr. 21, 2011]



**§ 63.494 Back-end process provisions—residual organic HAP and emission limitations.**

(a) The monthly weighted average residual organic HAP content of all grades of styrene butadiene rubber produced by the emulsion process, polybutadiene rubber and styrene butadiene rubber produced by the solution process, and ethylene propylene rubber produced by the solution process that is processed, shall be measured after the stripping operation (or the reactor(s), if the plant has no stripper(s)), as specified in § 63.495(d), and shall not exceed the limits provided in paragraphs (a)(1) through (3) of this section, as applicable. Owners or operators of these affected sources shall comply with the requirements of paragraphs (a)(1) through (3) of this section using either stripping technology, or control or recovery devices. The organic HAP emissions from all back-end process operations at affected sources producing butyl rubber, epichlorohydrin elastomer, neoprene, and nitrile butadiene rubber shall not exceed the limits determined in accordance with paragraph (a)(4) of this section, as applicable.

(1) For styrene butadiene rubber produced by the emulsion process:

(i) A monthly weighted average of 0.40 kg styrene per megagram (Mg) latex for existing affected sources; and

(ii) A monthly weighted average of 0.23 kg styrene per Mg latex for new sources;

(2) For polybutadiene rubber and styrene butadiene rubber produced by the solution process:

(i) A monthly weighted average of 10 kg total organic HAP per Mg crumb rubber (dry weight) for existing affected sources; and

(ii) A monthly weighted average of 6 kg total organic HAP per Mg crumb rubber (dry weight) for new sources.

(3) For ethylene-propylene rubber produced by the solution process:

(i) A monthly weighted average of 8 kg total organic HAP per Mg crumb rubber (dry weight) for existing affected sources; and

(ii) A monthly weighted average of 5 kg total organic HAP per Mg crumb rubber (dry weight) for new sources.

(4) The organic HAP emissions from back-end processes at affected sources producing butyl rubber, epichlorohydrin elastomer, neoprene, and nitrile butadiene rubber shall not exceed the limits determined in accordance with paragraphs (a)(4)(i) through (iv) of this section for any consecutive 12-month period. The specific limitation for each elastomer type shall be determined based on the calculation or the emissions level provided in paragraphs (a)(4)(i) through (iv) of this section divided by the base year elastomer product that leaves the stripping operation (or the reactor(s), if the plant has no stripper(s)). The limitation shall be calculated and submitted in accordance with § 63.499(f)(1).

(i) For butyl rubber, the organic HAP emission limitation shall be calculated using the following equation:

$$\text{BREL} = \frac{\text{Ce}_{2009} + \text{Be}_{2009} + \text{UCe}_{2009}}{\text{P}_{2009}} \times 1.35$$

Where:

$\text{Be}_{2009}$  = Bypass emissions in 2009, Mg/yr

$\text{BREL}$  = Butyl rubber emission limit, Mg organic HAP emissions/Mg butyl rubber produced

$\text{Ce}_{2009}$  = Controlled emissions in 2009, Mg/yr

$\text{P}_{2009}$  = Total elastomer product leaving the stripper in 2009, Mg/yr

$\text{UCe}_{2009}$  = Uncontrolled emissions in 2009, Mg/yr

1.35 = variability factor, unitless

(ii) For epichlorohydrin elastomer, the organic HAP emission limitation, in units of Mg organic HAP emissions per Mg of epichlorohydrin elastomer produced, shall be calculated by dividing 51 Mg/yr by the mass of epichlorohydrin elastomer produced in 2009, in Mg.

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(iii) For neoprene, the organic HAP emission limitation, in units of Mg organic HAP emissions per Mg of neoprene produced, shall be calculated by dividing 30 Mg/yr by the mass of neoprene produced in 2007, in Mg.

(iv) For nitrile butadiene rubber, the organic HAP emission limitation, in units of Mg organic HAP emissions per Mg of nitrile butadiene rubber produced, shall be calculated by dividing 2.4 Mg/yr by the mass of nitrile butadiene rubber produced in 2009, in Mg.

(5) For EPPU that produce both an elastomer product with a residual organic HAP limitation listed in paragraphs (a)(1) through (3) of this section, and a product listed in paragraphs (a)(5)(1) through (iv) of this section, only the residual HAP content of the elastomer product with a residual organic HAP limitation shall be used in determining the monthly average residual organic HAP content.

(i) Resins;

(ii) Liquid rubber products;

(iii) Latexes from which crumb rubber is not coagulated; or

(iii) Elastomer products listed in paragraph (a)(4) of this section.

(6) There are no back-end process operation residual organic HAP or emission limitations for Hypalon™ and polysulfide rubber production. There are also no back-end process operation residual organic HAP limitations for latex products, liquid rubber products, products produced in a gas-phased reaction process, styrene butadiene rubber produced by any process other than a solution or emulsion process, polybutadiene rubber produced by any process other than a solution process, or ethylene-propylene rubber produced by any process other than a solution process.

(b) If an owner or operator complies with the residual organic HAP limitations in paragraph (a)(1) through (3) of this section using stripping technology, compliance shall be demonstrated in accordance with § 63.495. The owner or operator shall also comply with the recordkeeping provisions in § 63.498, and the reporting provisions in § 63.499.

(c) If an owner or operator complies with the residual organic HAP limitations in paragraph (a)(1) through (3) of

this section using control or recovery devices, compliance shall be demonstrated using the procedures in § 63.496. The owner or operator shall also comply with the monitoring provisions in § 63.497, the recordkeeping provisions in § 63.498, and the reporting provisions in § 63.499.

(d) If the owner or operator complies with the residual organic HAP limitations in paragraph (a)(1) through (3) of this section using a flare, the owner or operator of an affected source shall comply with the requirements in § 63.504(c).

[62 FR 48925, Sept. 5, 1996, as amended at 65 FR 38065, June 19, 2000; 76 FR 22589, Apr. 21, 2011]

**§ 63.495 Back-end process provisions—procedures to determine compliance with residual organic HAP limitations using stripping technology and organic HAP emissions limitations.**

(a) If an owner or operator complies with the residual organic HAP limitations in § 63.494(a)(1) through (3) using stripping technology, compliance shall be demonstrated using the periodic sampling procedures in paragraph (b) of this section, or using the stripper parameter monitoring procedures in paragraph (c) of this section. The owner or operator shall determine the monthly weighted average residual organic HAP content for each month in which any portion of the back-end of an elastomer production process is in operation. A single monthly weighted average shall be determined for all back-end process operations at the affected source.

(b) If the owner or operator is demonstrating compliance using periodic sampling, this demonstration shall be in accordance with paragraphs (b)(1) through (b)(5) of this section.

(1) The location of the sampling shall be in accordance with paragraph (d) of this section.

(2) The frequency of the sampling shall be in accordance with paragraphs (b)(2)(i) or (b)(2)(ii) of this section.

(i) If a stripper operated in batch mode is used, at least one representative sample is to be taken from every batch of elastomer produced, at the location specified in paragraph (d) of this

section, and identified by elastomer type and by the date and time the batch is completed.

(ii) If a stripper operated in continuous mode is used, at least one representative sample is to be taken each operating day. The sample is to be taken at the location specified in paragraph (d) of this section, and identified by elastomer type and by the date and time the sample was taken.

(3) The residual organic HAP content in each sample is to be determined using the Methods specified in paragraph (e) of this section.

(4) The quantity of material (weight of latex or dry crumb rubber) represented by each sample shall be recorded. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(5) The monthly weighted average shall be determined using the equation in paragraph (f) of this section. All representative samples taken and analyzed during the month shall be used in the determination of the monthly weighted average.

(c) If the owner or operator is demonstrating compliance using stripper parameter monitoring, this demonstration shall be in accordance with paragraphs (c)(1) through (c)(4) of this section.

(1) The owner or operator shall establish stripper operating parameter levels for each grade in accordance with § 63.505(e).

(2) The owner or operator shall monitor the stripper operating parameters at all times the stripper is in operation. Readings of each parameter shall be made at intervals no greater than 15 minutes.

(3) The residual organic HAP content for each grade shall be determined in accordance with either paragraph (c)(3)(i) or (c)(3)(ii) of this section.

(i) If during the processing of a grade in the stripper, all hourly average parameter values are in accordance with operating parameter levels established in paragraph (c)(1) of this section, the owner or operator shall use the residual organic HAP content determined in accordance with § 63.505(e)(1).

(ii) If during the processing of a grade in the stripper, the hourly average of any stripper monitoring parameter is not in accordance with an established operating parameter level, the residual organic HAP content shall be determined using the procedures in paragraphs (b)(1) and (b)(3) of this section.

(4) The monthly weighted average shall be determined using the equation in paragraph (f) of this section.

(d) The location of the sampling shall be in accordance with paragraph (d)(1) or (d)(2) of this section.

(1) For styrene butadiene rubber produced by the emulsion process, the sample shall be a sample of the latex taken at the location specified in either paragraph (d)(1)(i), (d)(1)(ii), or (d)(1)(iii) of this section.

(i) When the latex is not blended with other materials or latexes, the sample shall be taken at a location meeting all of the following criteria:

(A) After the stripping operation.

(B) Prior to entering the coagulation operations, and

(C) Before the addition of carbon black or oil extenders.

(ii) When two or more latexes subject to this subpart are blended, samples may be taken in accordance with either paragraph (d)(1)(ii) (A) or (B) of this section, at a location meeting the requirements of paragraphs (d)(1)(i) (A) through (C) of this section.

(A) Individual samples may be taken of each latex prior to blending, or

(B) A sample of the blended latex may be taken.

(iii) When a latex subject to this subpart is blended with a latex or material not subject to this subpart, a sample shall be taken of the latex prior to blending at a location meeting the requirements of paragraphs (d)(1)(i) (A) through (C) of this section.

(2) For styrene butadiene rubber produced by the solution process, polybutadiene rubber produced by the solution process, and ethylene-propylene rubber produced by the solution process, the sample shall be a sample of crumb rubber taken as soon as safe and feasible after the stripping operation, but no later than the entry point for the first unit operation following the stripper (e.g., the dewatering screen).

(e) The residual organic HAP content in each sample is to be determined using the methods specified in paragraphs (e)(1) through (e)(5) of this section, as applicable.

(1) For styrene butadiene rubber produced by the emulsion process, either Method 312a, 312b, or 312c of 40 CFR part 63, appendix A, shall be used.

(2) For styrene butadiene rubber produced by the solution process, either Method 313a or 313b of 40 CFR part 63, appendix A, shall be used.

(3) For polybutadiene rubber produced by the solution process, either

Method 313a or 313b of 40 CFR part 63, appendix A, shall be used.

(4) For ethylene-propylene rubber produced by the solution process, either Method 310a, 310b, or 310c of 40 CFR part 63, appendix A, shall be used.

(5) Alternatively, any other method that has been validated according to the applicable procedures in Method 301 of 40 CFR part 63, appendix A, may be used.

(f) The monthly weighted average residual organic HAP content shall be calculated using Equation 26.

$$\text{HAPCONT}_{\text{avg. mo}} = \frac{\sum_{i=1}^n (C_i)(P_i)}{P_{\text{mo}}} \quad [\text{Eq. 26}]$$

Where:

$\text{HAPCONT}_{\text{avg. mo}}$  - Monthly weighted average organic HAP content for all rubber processed at the affected source, kg organic HAP per Mg latex or dry crumb rubber.

$n$  = Number of samples in the month.

$C_i$  = Residual organic HAP content of sample  $i$ , determined in accordance with paragraph (b)(3) or (c)(3) of this section, kg organic HAP per Mg latex or dry crumb rubber.

$P_i$  = Weight of latex or dry crumb rubber represented by sample  $i$ .

$P_{\text{mo}}$  = Weight of latex or dry crumb rubber (Mg) processed in the month.

(g) Compliance with the organic HAP emission limitations determined in accordance with § 63.494(a)(4) shall be demonstrated in accordance with paragraphs (g)(1) through (5) of this section.

(1) Calculate your organic HAP emission limitation in accordance with § 63.494(a)(4)(1) through (iv), as applicable, record it, and submit it in accordance with § 63.499(f)(1).

(2) Each month, calculate and record the organic HAP emissions from all back-end process operations using engineering assessment. Engineering assessment includes, but is not limited to, the following:

(i) Previous test results, provided the test was representative of current operating practices.

(ii) Bench-scale or pilot-scale test data obtained under conditions rep-

resentative of current process operating conditions.

(iii) 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:

(A) Use of material balances;

(B) Estimation of flow rate based on physical equipment design, such as pump or blower capacities;

(C) Estimation of organic HAP concentrations based on saturation conditions; and

(D) Estimation of organic HAP concentrations based on grab samples of the liquid or vapor.

(3) Each month, record the mass of elastomer product produced.

(4) Each month, calculate and record the sums of the organic HAP emissions and the mass of elastomer produced for the previous calendar 12-month period.

(5) Each month, divide the total mass of organic HAP emitted for the previous calendar 12-month period by the total mass of elastomer produced during this 12-month period. This value must be recorded in accordance with

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§ 63.498(e) and reported in accordance with § 63.499(f)(2).

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11543, Mar. 9, 1999; 65 FR 38066, June 19, 2000; 76 FR 22590, Apr. 21, 2011]

**§ 63.496 Back-end process provisions—procedures to determine compliance with residual organic HAP limitations using control or recovery devices.**

(a) If an owner or operator complies with the residual organic HAP limitations in § 63.494(a)(1) through (3) using control or recovery devices, compliance shall be demonstrated using the procedures in paragraphs (b) and (c) of this section. Previous test results conducted in accordance with paragraphs (b)(1) through (6) of this section may be used to determine compliance in accordance with paragraph (c) of this section.

(b) Compliance shall be demonstrated using the provisions in paragraphs (b)(1) through (b)(8) of this section, as applicable.

(1) A test shall be conducted, the duration of which shall be in accordance with either paragraph (b)(1)(i) or (b)(1)(ii) of this section, as appropriate.

(i) If the back-end process operations are continuous, the test shall consist of three separate one hour runs.

(ii) If the back-end process operations are batch, the test shall consist of three separate one-hour runs, unless the duration of the batch cycle is less than one-hour, in which case the run length shall equal the complete duration of the back-end process batch cycle.

(2) The test shall be conducted when the grade of elastomer product with the highest residual organic HAP content leaving the stripper is processed in the back-end operations.

(3) The uncontrolled residual organic HAP content in the latex or dry crumb rubber shall be determined in accordance with § 63.495(b)(1) and (b)(3). A separate sample shall be taken and analyzed for each test run. The sample shall be representative of the material being processed in the back-end operation during the test, and does not need to be taken during the test.

(4) The quantity of material (weight of latex or dry crumb rubber) processed

during the test run shall be recorded. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(5) The inlet and outlet emissions from the control or recovery device shall be determined using the procedures in paragraphs (b)(5)(i) through (b)(5)(v) of this section, with the exceptions noted in paragraphs (b)(6) and (b)(7) of this section. The inlet and outlet emissions shall be determined when the material for which the uncontrolled residual organic HAP content is determined in accordance with paragraph (b)(3) of this section, is being processed in the equipment controlled by the control or recovery device.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as appropriate, shall be used for selection of the sampling sites. Sampling sites for inlet emissions shall be located as specified in paragraphs (b)(5)(i)(A) or (b)(5)(i)(B) of this section. Sampling sites for outlet emissions shall be located at the outlet of the control or recovery device.

(A) The inlet sampling site shall be located at the exit of the back-end process unit operation before any opportunity for emission to the atmosphere [with the exception of equipment in compliance with the requirements in §§ 63.502(a) through 63.502(m)], and before any control or recovery device.

(B) If back-end process vent streams are combined prior to being routed to control or recovery devices, the inlet sampling site may be for the combined stream, as long as there is no opportunity for emission to the atmosphere [with the exception of equipment in compliance with the requirements in §§ 63.502(a) through 63.502(m)] from any of the streams prior to being combined.

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

(iii) To determine the inlet and outlet total organic HAP concentrations, the owner or operator shall use Method 18 or Method 25A of 40 CFR part 60, appendix A. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301, 40 CFR part 63, appendix A may be used. The minimum sampling

time for each run shall be in accordance with paragraph (b)(1) of this section, during which either an integrated sample or grab samples shall be taken. If grab sampling is used, then the samples shall be taken at approximately equal intervals during the run, with the time between samples no greater than 15 minutes.

(iv) The mass rate of total organic HAP shall be computed using Equations 27 and 28.

$$E_i = K_2 \left( \sum_{j=1}^n C_{ij} M_{ij} \right) Q_i \quad [\text{Eq. 27}]$$

$$E_o = K_2 \left( \sum_{j=1}^n C_{oj} M_{oj} \right) Q_o \quad [\text{Eq. 28}]$$

where:

$C_{ij}$ ,  $C_{oj}$  = Concentration of sample component  $j$  of the gas stream at the inlet and outlet of the control or recovery device, respectively, dry basis, ppmv.

$E_i$ ,  $E_o$  = Mass rate of total organic HAP at the inlet and outlet of the control or recovery device, respectively, dry basis, kg per hour (kg/hr).

$M_{ij}$ ,  $M_{oj}$  = Molecular weight of sample component  $j$  of the gas stream at the inlet and outlet of the control or recovery device, respectively, gm/gm-mole.

$Q_i$ ,  $Q_o$  = Flow rate of gas stream at the inlet and outlet of the control or recovery device, respectively, dry standard m<sup>3</sup>/min.

$K_2$  = Constant,  $2.494 \times 10^{-6}$  (ppmv)<sup>-1</sup> (gm-mole/scm) (kg/gm) (min/hr), where standard temperature is 20 °C.

(v) Inlet and outlet organic HAP emissions for the run shall be calculated by multiplying the mass rate total inlet and outlet emissions determined in accordance with paragraph (b)(5)(iv) of this section by the duration of the run (in hours).

(6) If a back-end process vent stream is introduced with the combustion air, or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, the inlet and outlet emissions shall be determined in accordance with paragraphs (b)(6)(i) through (b)(6)(iv) of this section.

(i) The inlet organic HAP emissions for the back-end process unit operation shall be determined in accordance with paragraph (b)(5) of this section.

(ii) The owner or operator shall also measure total organic HAP (or TOC, minus methane and ethane) emissions in all process vent streams and primary and secondary fuels introduced into the boiler or process heater, using the procedures in paragraph (b)(5) of this section, with the exceptions noted in paragraphs (b)(6)(i)(A) through (b)(6)(i)(C) of this section.

(A) Selection of the location of the inlet sampling sites shall ensure the measurement of total organic HAP concentrations in all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(B) Paragraph (b)(5)(iii) of this section is applicable, except that TOC (minus methane and ethane) may be measured instead of total organic HAP.

(C) The mass rates shall be calculated in accordance with paragraph (b)(5)(iv) of this section, except that  $C_j$  at the inlet and outlet of the control device shall be the sum of all total organic HAP (or TOC, minus methane and ethane) concentrations for all process vent streams and primary and secondary fuels introduced into the boiler or process heater.

(iii) The control efficiency of the boiler or process heater shall be calculated using Equation 29.

$$R = \frac{\sum_{i=1}^n E_{i\text{inlet}} - \sum_{i=1}^n E_{i\text{outlet}}}{\sum_{i=1}^n E_{i\text{inlet}}} (100) \quad (\text{Eq. 29})$$

where:

R = Control efficiency of boiler or process heater, percent.

$E_{inlet}$  = Mass rate of total organic HAP or TOC (minus methane and ethane) for all process vent streams and primary and secondary fuels at the inlet to the boiler or process heater, kg organic HAP/hr or kg TOC/hr.

$E_{outlet}$  = Mass rate of total organic HAP or TOC (minus methane and ethane) for all process vent streams and primary and secondary fuels at the outlet to the boiler or process heater, kg organic HAP/hr or kg TOC/hr.

(iv) The outlet total organic HAP emissions associated with the back-end process unit operation shall be calculated using Equation 30, as shown in paragraph (b)(8) of this section.

(7) An owner or operator is not required to conduct a source test to determine the outlet organic HAP emissions if any control device specified in paragraphs (b)(7)(i) through (b)(7)(vi) of this section is used. For these devices, the inlet emissions associated with the back-end process unit operation shall be determined in accordance with paragraph (b)(5) of this section, and the outlet emissions shall be calculated using the equation in paragraph (b)(8) of this section.

(i) A flare. The owner or operator shall demonstrate compliance as provided in § 63.504(c).

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

(iii) A boiler or process heater into which the process vent stream is introduced with the primary fuel or is used as the primary fuel.

(iv) A control device for which a performance test was conducted for determining compliance with a regulation promulgated by the EPA and the test was conducted using the same Methods specified in this section and either no deliberate process changes have been made since the test, or the owner or operator can demonstrate that the results of the performance test, with or without adjustments, reliably demonstrate compliance despite process changes.

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

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

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

(vi) 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.

(8) If one of the control devices listed in paragraph (b)(6) or (b)(7) of this section is used, the outlet emissions shall be calculated using Equation 30.

$$E_o = E_i (1 - R) \quad [\text{Eq. 30}]$$

where:

$E_o$  = Mass rate of total organic HAP at the outlet of the control or recovery device, dry basis, kg/hr.

$E_i$  = Mass rate of total organic HAP at the inlet of the control or recovery device, dry basis, kg/hr, determined using the procedures in paragraph (b)(5)(iv) of this section.

R = Control efficiency of control device, as specified in paragraph (b)(8)(i), (ii), or (iii) of this section.

(1) If a back-end process vent stream is introduced with the combustion air, or as a secondary fuel into a boiler or process heater with a design capacity less than 44 megawatts, the control efficiency of the boiler or process heater shall be determined using the procedures in paragraph (b)(6)(iii) of this section.

(ii) If a back-end process vent is controlled using a control device specified in paragraph (b)(7) (i), (ii), (iii), or (v) of this section, the control device efficiency shall be assumed to be 98 percent.

(iii) If a back-end process vent is controlled using a control device specified in paragraph (b)(7)(iv) of this section, the control device efficiency shall be the efficiency determined in the previous performance test.

(c) Compliance shall be determined using the procedures in this paragraph.

(1) For each test run, the residual organic HAP content, adjusted for the

control or recovery device emission reduction, shall be calculated using Equation 31.

$$\text{HAPCONT}_{\text{run}} = \frac{(C)(P) - (E_{i,\text{run}}) + (E_{o,\text{run}})}{(P)} \quad [\text{Eq. 31}]$$

Where:

$\text{HAPCONT}_{\text{run}}$  = Residual organic HAP content, kg organic HAP per kg elastomer (latex or dry crumb rubber).

C = Total uncontrolled organic HAP content, determined in accordance with paragraph (b)(3) of this section, kg organic HAP per kg latex or dry crumb rubber.

P = Weight of latex or dry crumb rubber processed during test run.

$E_{i,\text{run}}$  = Mass rate of total organic HAP at the inlet of the control or recovery device, dry basis, kg per test run.

$E_{o,\text{run}}$  = Mass rate of total organic HAP at the outlet of the control or recovery device, dry basis, kg per test run.

(2) A facility is in compliance if the average of the organic HAP contents calculated for all three test runs is below the residual organic HAP limitations in §63.494(a)(1) through (3).

(d) An owner or operator complying with the residual organic HAP limitations in §63.494(a)(1) through (3) using a control or recovery device, shall redetermine the compliance status through the requirements described in paragraph (b) of this section whenever process changes are made. The owner or operator shall report the results of the redetermination in accordance with §63.499(d). For the purposes of this section, a process change is any action that would reasonably be expected to impair the performance of the control or recovery device. For the purposes of this section, the production of an elastomer with a residual organic HAP content greater than the residual organic HAP content of the elastomer used in the compliance demonstration constitutes a process change, unless the overall effect of the change is to reduce organic HAP emissions from the source as a whole. Other examples of process changes may include changes in production capacity or production rate, or removal or addition of equipment. For the purposes of this para-

graph, process changes do not include: Process upsets; unintentional, temporary process changes; or changes that reduce the residual organic HAP content of the elastomer.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38066, June 19, 2000; 76 FR 22591, Apr. 21, 2011]

**§63.497 Back-end process provisions—monitoring provisions for control and recovery devices used to comply with residual organic HAP limitations.**

(a) An owner or operator complying with the residual organic HAP limitations in §63.494(a)(1) through (3) using control or recovery devices, or a combination of stripping and control or recovery devices, shall install the monitoring equipment specified in paragraphs (a)(1) through (6) of this section, as appropriate.

(1) Where an incinerator is used, a temperature monitoring device equipped with a continuous recorder is required.

(i) Where an incinerator other than a catalytic incinerator is used, the temperature monitoring device shall be installed in the firebox or in the ductwork immediately downstream of the firebox in a position before any substantial heat exchange occurs.

(ii) Where a catalytic incinerator is used, the temperature monitoring devices shall be installed in the gas stream immediately before and after the catalyst bed.

(2) Where a flare is used, a device (including, but not limited to, a thermocouple, ultra-violet beam sensor, or infrared sensor) capable of continuously detecting the presence of a pilot flame is required.

(3) Where a boiler or process heater of less than 44 megawatts design heat input capacity is used, a temperature



monitoring device in the firebox equipped with a continuous recorder is required. Any boiler or process heater in which all vent streams are introduced with primary fuel or are used as the primary fuel is exempt from this requirement.

(4) For an absorber, a scrubbing liquid temperature monitoring device and a specific gravity monitoring device are required, each equipped with a continuous recorder.

(5) For a condenser, a condenser exit (product side) temperature monitoring device equipped with a continuous recorder is required.

(6) For a carbon adsorber, an integrating regeneration steam flow, nitrogen flow, or pressure monitoring device having an accuracy of at least  $\pm 10$  percent of the flow rate, level, or pressure, capable of recording the total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) for each regeneration cycle; and a carbon bed temperature monitoring device, capable of recording the carbon bed temperature after each regeneration and within 15 minutes of completing any cooling cycle are required.

(b) An owner or operator may request approval to monitor parameters other than those required by paragraph (a) of this section. The request shall be submitted according to the procedures specified in § 63.506(f) or (g). Approval shall be requested if the owner or operator:

(1) Uses a control or recovery device other than those listed in paragraph (a) of this section; or

(2) Uses one of the control or recovery devices listed in paragraph (a) of this section, but seeks to monitor a parameter other than those specified in paragraph (a) of this section.

(c) The owner or operator shall establish a level, defined as either a maximum or minimum operating parameter, that indicates proper operation of the control or recovery device for each parameter monitored under paragraphs (a)(1) through (a)(6) of this section. This level is determined in accordance with § 63.505. The established level, along with supporting documentation, shall be submitted in the Notification of Compliance Status or the operating permit application, as required in

§ 63.506(e)(5) or (e)(8), respectively. The owner or operator shall operate control and recovery devices so that the daily average value is above or below the established level, as required, to ensure continued compliance with the standard, except as otherwise stated in this subpart.

(d) The owner or operator of an affected source with a controlled back-end process vent using a vent system that contains bypass lines that could divert a vent stream away from the control or recovery device used to comply with § 63.494(a)(1) through (3), shall comply with paragraph (d)(1) or (2) of this section. Equipment such as low leg drains, high point bleeds, analyzer vents, open-ended valves or lines, and pressure relief valves needed for safety purposes are not subject to this paragraph.

(1) Properly install, maintain, and operate a flow indicator that takes a reading at least once every 15 minutes. Records shall be generated as specified in § 63.498(d)(5)(iii). 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 non-diverting position with a car-seal or a lock-and-key type configuration. A visual inspection of the seal or closure mechanism shall be performed at least once every month to ensure that the valve is maintained in the non-diverting position and the vent stream is not diverted through the bypass line.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38067, June 19, 2000; 76 FR 22591, Apr. 21, 2011]

#### § 63.498 Back-end process provisions—recordkeeping.

(a) Each owner or operator shall maintain the records specified in paragraphs (a)(1) through (4), and paragraphs (b) through (e) of this section, as appropriate.

(1) The type of elastomer product processed in the back-end operation.

(2) The type of process (solution process, emulsion process, etc.)

(3) If the back-end process operation is subject to a residual organic HAP limitation in § 63.494(a)(1) through (3).

whether compliance will be achieved by stripping technology, or by control or recovery devices.

(4) If the back-end process operation is subject to an emission limitation in § 63.494(a)(4), the organic HAP emission limitation calculated in accordance with § 63.494(a)(4)(i) through (iv), as applicable.

(b) Each owner or operator of a back-end process operation using stripping technology to comply with a residual organic HAP limitation in § 63.494(a)(1) through (3), and demonstrating compliance using the periodic sampling procedures in § 63.495(b), shall maintain the records specified in paragraph (b)(1), and in paragraph (b)(2) or paragraph (b)(3) of this section, as appropriate.

(1) Records associated with each sample taken in accordance with § 63.495(b). These records shall include the following for each sample:

(i) Elastomer type.

(ii) The date and time the sample was collected.

(iii) The corresponding quantity of elastomer processed over the time period represented by the sample. Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations.

(A) For emulsion processes, this quantity shall be the weight of the latex leaving the stripper.

(B) For solution processes, this quantity shall be the crumb rubber dry weight of the rubber leaving the stripper.

(iv) The organic HAP content of each sample.

(2) The monthly weighted average organic HAP content, calculated in accordance with § 63.495(f).

(3) If the organic HAP contents for all samples analyzed during a month are below the appropriate level in § 63.494(a), the owner or operator may record that all samples were in accordance with the residual organic HAP limitations in § 63.494(a)(1) through (3), rather than calculating and recording a monthly weighted average.

(c) Each owner or operator of a back-end process operation using stripping technology to comply with a residual organic HAP limitation in § 63.494(a)(1) through (3), and demonstrating compli-

ance using the stripper parameter monitoring procedures in § 63.495(c), shall maintain the records specified in paragraphs (c)(1) through (3) of this section.

(1) Records associated with the initial, and subsequent, determinations of the organic HAP content of each grade of elastomer produced. These records shall include the following:

(i) An identification of the elastomer type and grade;

(ii) The results of the residual organic HAP analyses, conducted in accordance with § 63.505(e)(1);

(iii) The stripper monitoring parameters required to be established in § 63.495(c)(1).

(iv) If re-determinations are made of the organic HAP content, and re-establishment of the stripper monitoring parameters, records of the initial determination are no longer required to be maintained.

(2) Records associated with each grade or batch. These records shall include the following for each grade or batch:

(i) Elastomer type and grade;

(ii) The quantity of elastomer processed:

(A) For emulsion processes, this quantity shall be the weight of the latex leaving the stripper.

(B) For solution processes, this quantity shall be the crumb rubber dry weight of the crumb rubber leaving the stripper.

(iii) The hourly average of all stripper parameter results;

(iv) If one or more hourly average stripper monitoring parameters is not in accordance with the established levels, the results of the residual organic HAP analysis.

(3) The monthly weighted average organic HAP content, calculated in accordance with § 63.495(f).

(d) Each owner or operator of a back-end process operation using control or recovery devices to comply with a residual organic HAP limitation in § 63.494(a)(1) through (3), shall maintain the records specified in paragraphs (d)(1) through (5) of this section. The recordkeeping requirements contained in paragraphs (d)(1) through (4) pertain to the results of the testing required by § 63.496(b), for each of the three required test runs.

(1) The uncontrolled residual organic HAP content in the latex or dry crumb rubber, as required to be determined by § 63.496(b)(3), including the test results of the analysis;

(2) The total quantity of material (weight of latex or dry crumb rubber) processed during the test run, recorded in accordance with § 63.496(b)(4);

(3) The organic HAP emissions at the inlet and outlet of the control or recovery device, determined in accordance with § 63.496(b)(5) through (b)(8), including all test results and calculations.

(4) The residual organic HAP content, adjusted for the control or recovery device emission reduction, determined in accordance with § 63.496(c)(1).

(5) Each owner or operator using a control or recovery device shall keep the following records readily accessible:

(i) Continuous records of the equipment operating parameters specified to be monitored under § 63.497(a) or specified by the Administrator in accordance with § 63.497(b). For flares, the records specified in Table 3 of 40 CFR part 63, subpart G shall be maintained in place of continuous records.

(ii) Records of the daily average value of each continuously monitored parameter for each operating day, except as provided in paragraphs (d)(5)(ii)(D) and (d)(5)(ii)(E) of this section.

(A) The daily average shall be calculated as the average of all values for a monitored parameter recorded during the operating day, except as provided in paragraph (d)(5)(ii)(B) of this section. The average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(B) Monitoring data recorded during periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments, shall not be included in computing the hourly or daily averages. In addition, monitoring data recorded during periods of non-operation of the EPPU (or specific portion thereof) resulting in cessation of organic HAP emissions, shall not be included in computing the hourly or daily averages. Records shall be kept of the times

and durations of all such periods and any other periods of process or control device operation when monitors are not operating.

(C) The operating day shall be the period defined in the operating permit or the Notification of Compliance Status in § 63.506(e)(8) or (e)(5). It may be from midnight to midnight or another 24-hour period.

(D) If all recorded values for a monitored parameter during an operating day are below the maximum, or above the minimum, level established in the Notification of Compliance Status in § 63.506(e)(5) or in the operating permit, the owner or operator may record that all values were below the maximum or above the minimum level, rather than calculating and recording a daily average for that operating day.

(E) For flares, records of the times and duration of all periods during which the pilot flame is absent, shall be kept rather than daily averages. The records specified in this paragraph are not required during periods when emissions are not routed to the flare.

(iii) Hourly records of whether the flow indicator specified under § 63.497(d)(1) was operating and whether a diversion was detected at any time during the hour, as well as records of the times of all periods when the vent stream is diverted from the control device or the flow indicator is not operating.

(iv) Where a seal mechanism is used to comply with § 63.497(d)(2), hourly records of flow are not required.

(A) For compliance with § 63.497(d)(2), the owner or operator shall record whether the monthly visual inspection of the seals or closure mechanisms has been done, and shall record instances when the seal mechanism is broken, the bypass line damper or valve position has changed, or the key for a lock-and-key type configuration has been checked out, and records of any car-seal that has broken.

(B) [Reserved]

(e) If the back-end process operation is subject to an organic HAP emission limitation in § 63.494(a)(4), the records specified in paragraphs (e)(1) through (4) of this section.

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(1) The applicable organic HAP emission limitation determined in accordance with § 63.494(a)(4)(i) through (iv).

(2) The organic HAP emissions from all back-end process operations for each month, along with documentation of all calculations and other information used in the engineering assessment to estimate these emissions.

(3) The mass of elastomer product produced each month.

(4) The total mass of organic HAP emitted for each 12-month period divided by the total mass of elastomer produced during the 12-month period, determined in accordance with § 63.495(g)(5).

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38068, June 19, 2000; 76 FR 22591, Apr. 21, 2011]

**§ 63.499 Back-end process provisions—reporting.**

(a) The owner or operator of an affected source with back-end process operations shall submit the information required in paragraphs (a)(1) through (a)(3) of this section, for each back-end process operation at the affected source, as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(1) The type of elastomer product processed in the back-end operation.

(2) The type of process (solution process, emulsion process, etc.)

(3) If the back-end process operation is subject to a residual organic HAP limitation in § 63.494(a)(1) through (3), whether compliance will be achieved by stripping technology, or by control or recovery devices.

(b) Each owner or operator of a back-end process operation using stripping to comply with a residual organic HAP limitation in § 63.494(a)(1) through (3), and demonstrating compliance by stripper parameter monitoring, shall submit reports as specified in paragraphs (b)(1) and (2) of this section.

(1) As part of the Notification of Compliance Status specified in § 63.506(e)(5), the owner or operator shall submit the information specified in § 63.498(c)(1).

(2) For organic HAP content/stripper monitoring parameter re-determinations, and the addition of new grades, the information specified in

§ 63.498(c)(1) shall be submitted in the next periodic report specified in § 63.506(e)(6).

(c) Each owner or operator of an affected source with a back-end process operation control or recovery device that shall comply with a residual organic HAP limitation in § 63.494(a)(1) through (3), shall submit the information specified in paragraphs (c)(1) through (3) of this section as part of the Notification of Compliance Status specified in § 63.506(e)(5).

(1) The residual organic HAP content, adjusted for the control or recovery device emission reduction, determined in accordance with § 63.496(c)(1), for each test run in the compliance determination.

(2) The operating parameter level established in accordance with § 63.497(c), along with supporting documentation.

(3) The information specified in paragraphs (c)(3)(i) when using a flare, and the information specified in paragraph (c)(3)(ii) of this section when using a boiler or process heater.

(1) The flare design (i.e., steam-assisted, air-assisted, or non-assisted); all visible emission readings, heat content determinations, flow rate measurements, and exit velocity determinations made during the compliance determination; and all periods during the compliance determination when the pilot flame is absent.

(ii) A description of the location at which the vent stream is introduced into the boiler or process heater.

(d) Whenever a process change, as defined in § 63.496(d), is made that causes the redetermination of the compliance status for the back-end process operations subject to a residual organic HAP limitation in § 63.494(a)(1) through (3), the owner or operator shall submit a report within 180 days after the process change, as specified in § 63.506(e)(7)(iii). The report shall include:

(1) A description of the process change;

(2) The results of the redetermination of the compliance status, determined in accordance with § 63.496(b), and recorded in accordance with § 63.498(d)(1), and

(3) Documentation of the re-establishment of a parameter level for the

control or recovery device, defined as either a maximum or minimum operating parameter, that indicates proper operation of the control or recovery device, in accordance with § 63.497(c) and recorded in accordance with § 63.498(d)(2).

(e) If an owner or operator uses a control or recovery device other than those listed in § 63.497(a) or requests approval to monitor a parameter other than those specified in § 63.497(a), the owner or operator shall submit a description of planned reporting and recordkeeping procedures as required under § 63.506(e)(3) or (e)(8). The Administrator will specify appropriate reporting and recordkeeping requirements as part of the review of the Precompliance Report or Operating Permit application.

(f) If the back-end process operation is subject to an organic HAP emission limitation in § 63.494(a)(4), the owner and operator must submit the information specified in paragraphs (f)(1) and (2) of this section.

(1) The applicable organic HAP emission limitation determined in accordance with § 63.494(a)(4)(i) through (iv), shall be submitted no later than 180 days from the date of publication of the final rule amendments in the FEDERAL REGISTER.

(2) Beginning with the first periodic report required to be submitted by § 63.506(e)(6) that is at least 13 months after the compliance date, the total mass of organic HAP emitted for each of the rolling 12-month periods in the reporting period divided by the total mass of elastomer produced during the corresponding 12-month period, determined in accordance with § 63.495(g)(5).

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38068, June 19, 2000; 76 FR 22592, Apr. 21, 2011]

**§ 63.500 Back-end process provisions—carbon disulfide limitations for styrene butadiene rubber by emulsion processes.**

(a) Owners or operators of sources subject to this subpart producing styrene butadiene rubber using an emulsion process shall operate the process such that the carbon disulfide concentration in each crumb dryer exhausts shall not exceed 95 ppmv.

(1) The owner or operator shall develop standard operating procedures for the addition of sulfur containing shortstop agents to ensure that the limitation in paragraph (a) of this section is maintained. There shall be a standard operating procedure representing the production of every grade of styrene butadiene rubber produced at the affected source using a sulfur containing shortstop agent.

(2) A validation of each standard operating procedure shall be conducted in accordance with paragraph (c) of this section, except as provided in paragraph (b) of this section, to demonstrate compliance with the limitation in paragraph (a) of this section.

(3) The owner or operator shall operate the process in accordance with a validated standard operating procedure at all times when styrene butadiene rubber is being produced using a sulfur containing shortstop agent. If a standard operating procedure is changed, it shall be re-validated.

(4) Records specified in paragraph (d) of this section shall be maintained.

(5) Reports shall be submitted in accordance with paragraph (e) of this section.

(b) Crumb dryers that are vented to a combustion device are not subject to the provisions in this section.

(c) The owner or operator shall validate each standard operating procedure to determine compliance with the limitation in paragraph (a) of this section using the testing procedures in paragraph (c)(1) of this section or engineering assessment, as described in paragraph (c)(2) of this section.

(1) The owner or operator may choose to conduct a performance test, using the procedures in paragraphs (c)(1)(i) through (c)(1)(iii) of this section to demonstrate compliance with the carbon disulfide concentration limitation in paragraph (a) of this section. One test shall be conducted for each standard operating procedure.

(i) Method 1 or 1A of 40 CFR part 60, appendix A, as required, shall be used for selection of the sampling sites.

(ii) The gas volumetric flow rate shall be determined using Method 2.2A, 2C, or 2D of 40 CFR part 60, appendix A, as required.

(iii) To determine compliance with the carbon disulfide concentration limit in paragraph (a) of this section, the owner or operator shall use Method 18 or Method 25A of 40 CFR part 60, appendix A to measure carbon disulfide. Alternatively, any other method or data that has been validated according to the applicable procedures in Method 301, 40 CFR part 63, appendix A, may be used. The following procedures shall be used to calculate carbon disulfide concentration:

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

(B) The concentration of carbon disulfide shall be calculated using Equation 32.

$$C_{CS_2} = \frac{\sum_{i=1}^n (C_{CS_2i})}{n} \quad [\text{Eq. 32}]$$

where:

$C_{CS_2}$  = Concentration of carbon disulfide, dry basis, ppmv.

$C_{CS_2i}$  = Concentration of carbon disulfide of sample  $i$ , dry basis, ppmv.

$n$  = Number of samples in the sample run.

(2) The owner or operator may use engineering assessment to demonstrate compliance with the carbon disulfide concentration limitation in paragraph (a) of this section. Engineering assessment includes, but is not limited to, the following:

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

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

(iii) Flow rate and/or carbon disulfide emission rate specified or implied within an applicable permit limit.

(iv) 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:

(A) Use of material balances.

(B) Estimation of flow rate based on physical equipment design such as pump or blower capacities, and

(C) Estimation of carbon disulfide concentrations based on saturation conditions.

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

(d) Owners and operators of sources subject to this section shall maintain the records specified in paragraphs (d)(1) and (d)(2) of this section.

(1) Documentation of the results of the testing required by paragraph (c) of this section.

(2) A description of the standard operating procedure used during the testing. This description shall include, at a minimum, an identification of the sulfur containing shortstop agent added to the styrene butadiene rubber prior to the dryers, an identification of the point and time in the process where the sulfur containing shortstop agent is added, and an identification of the amount of sulfur containing shortstop agent added per unit of latex.

(e) Owners and operators shall submit the reports as specified in paragraphs (e)(1) and (e)(2) of this section.

(1) As part of the Notification of Compliance Status specified in § 63.506(e)(5), documentation of the results of the testing required by paragraph (c) of this section.

(2) If changes are made in the standard operating procedure used during the compliance test and recorded in accordance with paragraph (d)(2) of this section, and if those changes have the potential for increasing the concentration of carbon disulfide in the crumb dryer exhaust to above the 45 ppmv limit, the owner or operator shall:

(i) Redetermine compliance using the test procedures in paragraph (c) of this section, and

(ii) Submit documentation of the testing results in the next periodic report required by § 63.506(e)(6).

[62 FR 46025, Sept. 5, 1996, as amended at 65 FR 38068, June 19, 2000]

## § 63.501 Wastewater provisions.

(a) Except as specified in paragraph (c) of this section, the owner or operator of each affected source shall comply with the requirements of §§ 63.132 through 63.147 for each process wastewater stream originating at an affected source, with the requirements of § 63.148 for leak inspection provisions, and with the requirements of § 63.149 for equipment that is subject to § 63.149, with the differences noted in paragraphs (a)(1) through (a)(23) of this section. Further, the owner or operator of each affected source shall comply with the requirements of § 63.105(a) for maintenance wastewater, as specified in paragraph (b) of this section.

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

(2) When the storage vessel requirements contained in §§ 63.119 through 63.123 are referred to in §§ 63.132 through 63.149, §§ 63.119 through 63.123 are applicable, with the exception of the differences referred to in § 63.484, for the purposes of this subpart.

(3) Owners and operators of affected sources are not required to comply with the requirements in § 63.132(b)(1) and § 63.132(d). Owners and operators of new affected sources, as defined in this subpart, shall comply with the requirements for existing sources in §§ 63.132 through 63.149, with the exceptions noted in paragraphs (a)(4), (a)(10), and (a)(23) of this section.

(4) When § 63.146(a) requires the submission of a request for approval to monitor alternative parameters according to the procedures specified in § 63.151(f) or (g), owners or operators requesting to monitor alternative parameters shall follow the procedures specified in § 63.506(f), for the purposes of this subpart.

(5) When § 63.147(d) requires owners or operators to keep records of the daily average value of each continuously monitored parameter for each operating day as specified in § 63.152(f), owners and operators shall instead keep records of the daily average value of each continuously monitored parameter as specified in § 63.506(d), for the purposes of this subpart.

(6) When §§ 63.132 through 63.149 refer to an "existing source," the term "existing affected source," as defined in § 63.480(a)(3) shall apply, for the purposes of this subpart.

(7) When §§ 63.132 through 63.149 refer to a "new source," the term "new affected source," as defined in § 63.480(a)(4) shall apply, for the purposes of this subpart.

(8) Whenever §§ 63.132 through 63.149 refer to a "chemical manufacturing process unit," the term "elastomer product process unit," (or EPPU) as defined in § 63.482, shall apply for the purposes of this subpart. In addition, when § 63.149 refers to "a chemical manufacturing process unit that meets the criteria of § 63.100(b) of subpart F of this part," the term "an EPPU as defined in § 63.482(b)" shall apply for the purposes of this subpart.

(9) When § 63.132(a) and (b) refer to the "applicable dates specified in § 63.100 of subpart F of this part," the compliance dates specified in § 63.401 shall apply, for the purposes of this subpart.

(10) The provisions of paragraphs (a)(10)(i), (a)(10)(ii), and (a)(10)(iii) of this section clarify the organic HAP that an owner or operator shall consider when complying with the requirements of §§ 63.132 through 63.149.

(i) Owners and operators are exempt from all requirements in §§ 63.132 through 63.149 that pertain solely and exclusively to organic HAP listed on table 8 of 40 CFR part 63, subpart G.

(ii) When §§ 63.132 through 63.149 refer to table 9 compounds, the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.482 and that are listed in table 9 of 40 CFR part 63, subpart G, for the purposes of this subpart.

(iii) When §§ 63.132 through 63.149 refer to compounds in table 36 of 40 CFR part 63, subpart G, or compounds in List 1 and/or List 2, as listed in table 36 of 40 CFR part 63, subpart G, the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.482 and that are listed in table 36 of 40 CFR part 63, subpart G, for the purposes of this subpart.

(11) Whenever §§63.132 through 63.147 refer to a Group 1 wastewater stream or a Group 2 wastewater stream, the definitions of these terms contained in §63.482 shall apply, for the purposes of this subpart.

(12) When §63.149(d) refers to “§63.100(f) of subpart F” the phrase “§63.480(c)” shall apply for the purposes of this subpart. In addition, where §63.149(d) states “and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, or H of this part”, the phrase “and the item of equipment is not otherwise exempt from controls by the provisions of subparts A, F, G, H, or U of this part,” shall apply for the purposes of this subpart.

(13) When §63.149(e)(1) and (e)(2) refer to “a chemical manufacturing process unit subject to the new source requirements of 40 CFR 63.100(l)(1) or 40 CFR 63.100 (l)(2),” the phrase “an EPPU that is part of a new affected source or that is a new affected source,” shall apply for the purposes of this subpart.

(14) When the Notification of Compliance Status requirements contained in §63.152(b) are referred to in §§63.138 and 63.146, the Notification of Compliance Status requirements contained in §63.506(e)(5) shall apply for the purposes of this subpart. In addition, when §§63.138 and 63.146 require that information be reported according to §63.152(b) in the Notification of Compliance Status, owners or operators of affected sources shall report the specified information in the Notification of Compliance Status required by §63.506(e)(5), for the purposes of this subpart.

(15) When the Periodic Report requirements contained in §63.152(c) are referred to in §63.146, the Periodic Report requirements contained in §63.506(e)(6) shall apply for the purposes of this subpart. In addition, when §63.146 requires that information be reported in the Periodic Reports required in §63.152(c), owners or operators of affected sources shall report the specified information in the Periodic Reports required in §63.506(e)(6), for the purposes of this subpart.

(16) When the term “range” is used in §§63.132 through 63.149, the term “level” shall apply instead, for the purposes of this subpart. This level shall

be determined using the procedures specified in §63.505.

(17) When §63.143(f) specifies that owners or operators shall establish the range that indicates proper operation of the treatment process or control device, the owner or operator shall instead comply with the requirements of §63.505(c) or (d) for establishing parameter level maximums/minimums, for the purposes of this subpart.

(18) When §63.146(b)(7) and §63.146(b)(8) require that “the information on parameter ranges specified in §63.152(b)(2)” be reported in the Notification of Compliance Status, owners and operators of affected sources are instead required to report the information on parameter levels in the Notification of Compliance Status as specified in §63.506(e)(5)(ii), for the purposes of this subpart.

(19) For the purposes of this subpart, the owner or operator of an affected source is not required to include process wastewater streams that contain styrene when conducting performance tests for the purposes of calculating the required mass removal (RMR) or the actual mass removal (AMR) under the provisions described in §63.145(f) or §63.145(g). For purposes of this paragraph, a process wastewater stream is considered to contain styrene if the wastewater stream meets the requirements in paragraph (a)(19)(i), (ii), or (iii) of this section:

(i) The wastewater stream originates at equipment that produces styrene butadiene rubber by solution;

(ii) The wastewater stream originates at equipment that produces styrene butadiene rubber by emulsion; or

(iii) The wastewater stream originates at equipment that produces styrene butadiene latex.

(20) When the provisions of §63.139(c)(1)(ii), §63.145(d)(4), or §63.145(l)(2) specify that Method 18, 40 CFR part 60, appendix A shall be used, Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (a)(20)(i) and (a)(20)(ii) of this section.

(i) 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 of the emissions.

(11) 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.

(21) In § 63.145(j), instead of the reference to § 63.11(b), and instead of § 63.145(j)(1) and § 63.145(j)(2), the requirements in § 63.504(c) shall apply.

(22) The owner or operator of a facility which receives a Group 1 wastewater stream, or a residual removed from a Group 1 wastewater stream, for treatment pursuant to § 63.132(g) is subject to the requirements of § 63.132(g) with the differences identified in this section, and is not subject to subpart DD of this part, with respect to the received material.

(23) When § 63.132(g) refers to “§§ 63.133 through 63.137” or “§§ 63.133 through 63.147”, the provisions in this § 63.501 shall apply, for the purposes of this subpart.

(b) Except for those streams exempted by paragraph (c) of this section, the owner or operator of each affected source shall comply with the requirements for maintenance wastewater in § 63.105, except that when § 63.105(a) refers to “organic HAPs listed in table 9 of subpart G of this part,” the owner or operator is only required to consider compounds that meet the definition of organic HAP in § 63.482 and that are listed in table 9 of 40 CFR part 63, subpart G, for the purposes of this subpart.

(c) The provisions of paragraphs (a) and (b) of this section do not apply to the following:

(1) Back-end streams originating from equipment whose only elastomer products are latex products.

(2) Back-end streams at affected sources that are subject to a residual organic HAP limitation in § 63.494(a)(1) through (3) and that are complying with these limitations through the use of stripping technology.

[62 FR 46925, Sept. 5, 1996, as amended at 65 FR 38069, June 19, 2000; 66 FR 36828, July 16, 2001; 76 FR 22592, Apr. 21, 2011]

#### § 63.502 Equipment leak and heat exchange system provisions.

(a) *Equipment leak provisions.* The owner or operator of each affected source shall comply with the requirements of subpart H of this part, with the exceptions noted in paragraphs (b) through (m) of this section. Surge control vessels required to be controlled by subpart H may, alternatively, comply with the Group 1 storage vessel provisions specified in § 63.484.

(b) Surge control vessels and bottoms receivers described in paragraphs (b)(1) through (b)(7) of this section are exempt from the requirements contained in § 63.170.

(1) Surge control vessels and bottoms receivers that receive only styrene-butadiene latex:

(2) Surge control vessels and bottoms receivers that receive latex products other than styrene-butadiene latex, located downstream of the stripping operations:

(3) Surge control vessels and bottoms receivers that receive only high conversion latex products;

(4) Surge control vessels and bottoms receivers located downstream of the stripping operations at affected sources subject to the back-end residual organic HAP limitation located in § 63.494(a)(1) through (3) that are complying through the use of stripping technology, as specified in § 63.495;

(5) Surge control vessels and bottoms receivers that receive only styrene;

(6) Surge control vessels and bottoms receivers that receive only acrylamide; and

(7) Surge control vessels and bottoms receivers that receive only epichlorohydrin.

(c) The compliance date for the equipment leak provisions in this section is provided in § 63.481(d). Whenever subpart H of this part refers to the compliance dates specified in any paragraph contained in § 63.100, the compliance dates listed in § 63.481(d) shall instead apply, for the purposes of this subpart. When § 63.182(c)(4) refers to “sources subject to subpart F,” the phrase “sources subject to this subpart” shall apply, for the purposes of this subpart. In addition, extensions of compliance dates are addressed by

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§63.481(e) instead of by §63.182(a)(6), for the purposes of this subpart.

(d) For an affected source producing polybutadiene rubber or styrene butadiene rubber by solution, the conditions in paragraphs (d)(1), (d)(2), and (d)(3) of this section are applicable.

(1) Indications of liquids dripping, as defined in subpart H of this part, from bleed ports in pumps and agitator seals in light liquid service, shall not be considered a leak. For the purposes of this subpart, a "bleed port" is a technologically-required feature of the pump or seal whereby polymer fluid used to provide lubrication and/or cooling of the pump or agitator shaft exits the pump, thereby resulting in a visible dripping of fluid.

(2) For reciprocating pumps in heavy liquid service, owners and operators are not required to comply with the requirements in §63.169 and associated recordkeeping and reporting requirements.

(3) Reciprocating pumps in light liquid service are exempt from §63.163 and associated recordkeeping and reporting requirements, if recasting the distance piece or reciprocating pump replacement would be necessary to comply with that section.

(e) Owners and operators of an affected source subject to this subpart are not required to submit the Initial Notification required by §63.182(a)(1) and §63.182(b).

(f) As specified in §63.506(e)(5), the Notification of Compliance Status required by §63.182(a)(2) and §63.182(c) shall be submitted within 150 days (rather than 90 days) of the applicable compliance date specified in §63.481(d) for the equipment leak provisions.

(g) The information specified by §63.182(a)(3) and §63.182(d) (i.e., Periodic Reports) shall be submitted as part of the Periodic Reports required by §63.506(e)(6).

(h) If specific items of equipment, comprising part of a process unit subject to this subpart, are managed by different administrative organizations (e.g., different companies, affiliates, departments, divisions, etc.), those items of equipment may be aggregated with any EPPU within the affected source for all purposes under subpart H of this part, providing there is no delay

in achieving the applicable compliance date.

(i) When §63.166(b)(4)(i) refers to Table 9 of subpart G of this part, the owner or operator is only required to consider organic HAP listed on Table 9 of subpart G of this subpart that are also listed on Table 5 of this subpart.

(j) When the provisions of subpart H of this part specify that Method 18, 40 CFR part 60, appendix A shall be used, either Method 18 or Method 25A, 40 CFR part 60, appendix A may be used for the purposes of this subpart. The use of Method 25A, 40 CFR part 60, appendix A shall conform with the requirements in paragraphs (j)(1) and (j)(2) of this section.

(1) 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 of emissions.

(2) The use of Method 25A, 40 CFR part 63, 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.

(k) An owner or operator using a flare to comply with the requirements of this section shall conduct a compliance demonstration as specified in §63.504(c).

(l) When the term "equipment" is used in subpart H of this part, the definition of this term in §63.482(b) shall apply for the purposes of this subpart.

(m) The phrase "the provisions of subparts F, I, or U of this part" shall apply instead of the phrase "the provisions of subpart F or I of this part" throughout §§63.163 and 63.168, for the purposes of this subpart. In addition, the phrase "subparts F, I, and U" shall apply instead of the phrase "subparts F and I" in §63.174(c)(2)(iii), for the purposes of this subpart.

(n) *Heat exchange system provisions.* The owner or operator of each affected source shall comply with the requirements of §63.104 for heat exchange systems, with the exceptions noted in paragraphs (n)(1) through (n)(5) of this section.

(1) When the term "chemical manufacturing process unit" is used in

§ 63.104, the term "elastomer product process unit" (or EPPU) shall apply for the purposes of this subpart, with the exception noted in paragraph (n)(2) of this section.

(2) When the phrase "a chemical manufacturing process unit meeting the conditions of § 63.100(b)(1) through (b)(3) of this subpart, except for chemical manufacturing process units meeting the condition specified in § 63.100(c) of this subpart" is used in § 63.104(a), the term "an EPPU, except for EPPUs meeting the condition specified in § 63.480(b)" shall apply for the purposes of this subpart.

(3) When § 63.104 refers to Table 4 of subpart F of this part or Table 9 of subpart G of this part, the owner or operator is only required to consider organic HAP listed on Table 5 of this subpart.

(4) When § 63.104(c)(3) specifies the monitoring plan retention requirements, and when § 63.104(f)(1) refers to the record retention requirements in § 63.103(c)(1), the requirements in § 63.506(a) and § 63.506(h) shall apply, for the purposes of this subpart.

(5) When § 63.104(f)(2) requires information to be reported in the Periodic Reports required by § 63.152(c), the owner or operator shall instead report the information specified in § 63.104(f)(2) in the Periodic Reports required by § 63.506(e)(6), for the purposes of this subpart.

(6) The compliance date for heat exchange systems subject to the provisions of this section is specified in § 63.481(d)(6).

[62 FR 46925, Sept. 5, 1996, as amended at 62 FR 37722, July 15, 1997; 65 FR 38070, June 19, 2000; 76 FR 22592, Apr. 21, 2011]

#### § 63.503 Emissions averaging provisions.

(a) This section applies to owners or operators of existing affected sources who seek to comply with § 63.483(b) by using emissions averaging rather than following the provisions of §§ 63.484, 63.485, 63.486, 63.494, and 63.501.

(1) The following emission point limitations apply to the use of these provisions:

(i) All emission points included in an emissions average shall be from the same affected source. There may be an

emissions average for each individual affected source located at a plant site.

(1)(A) If a plant site has only one affected source for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed to be included in the emission average is limited to twenty. This number may be increased by up to five additional points if pollution prevention measures are used to control five or more of the emission points included in the emissions average.

(B) If a plant site has two or more affected sources for which emissions averaging is being used to demonstrate compliance, the number of emission points allowed in the emissions average for those affected sources is limited to twenty. This number may be increased by up to five additional emission points if pollution prevention measures are used to control five or more of the emission points included in the emissions averages.

(2) Compliance with the provisions of this section may be based on either organic HAP or TOC.

(3) For the purposes of the provisions in this section, whenever Method 18, 40 CFR part 60, appendix A, is specified within the paragraphs of this section or is specified by reference through provisions outside this section, Method 18 or Method 25A, 40 CFR part 60, appendix A, may be used. The use of Method 25A, 40 CFR part 60, appendix A, shall conform with the requirements in paragraphs (a)(3)(i) and (a)(3)(ii) of this section.

(i) 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 of the emissions.

(ii) 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.

(b) Unless an operating permit application has been submitted, the owner or operator shall develop and submit for approval an Emissions Averaging Plan containing all of the information required in § 63.506(e)(4) for all emission

points to be included in an emissions average.

(c) Paragraphs (c)(1) through (c)(4) of this section describe the emission points that may be used to generate emissions averaging credits if control was applied after November 15, 1990 and if sufficient information is available to determine the appropriate value of credits for the emission point. Paragraph (c)(5) of this section discusses the use of pollution prevention in generating emissions averaging credits.

(1) Storage vessels, batch front-end process vents, aggregate batch vent streams, continuous front-end process vents, and process wastewater streams that are determined to be Group 2 emission points.

(2) Storage vessels, continuous front-end process vents, and process wastewater streams that are determined to be Group 1 emission points and that are controlled by a technology that the Administrator or permitting authority agrees has a higher nominal efficiency than the reference control technology. Information on the nominal efficiencies for such technologies shall be submitted and approved as provided in paragraph (i) of this section.

(3) Batch front-end process vents and aggregate batch vent streams that are determined to be Group 1 emission points and that are controlled to a level more stringent than the applicable standard.

(4) Back-end process operations that are controlled such that organic HAP emissions from the back-end process operation are less than would be achieved by meeting the residual organic HAP limits in §63.494. For the purposes of the emission averaging provisions in this section, all back-end process operations at an affected facility shall be considered a single emission point.

(5) The percent reduction for any storage vessel, batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, and process wastewater stream shall be determined using the procedures specified in paragraph (j) of this section.

(1) For a Group 1 storage vessel, batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, or process waste-

water stream, the pollution prevention measure shall reduce emissions more than if the reference control technology or standard had been applied to the emission point instead of the pollution prevention measure, except as provided in paragraph (c)(5)(ii) of this section.

(ii) If a pollution prevention measure is used in conjunction with other controls for a Group 1 storage vessel, batch front-end process vent, aggregate batch vent stream, continuous front-end process vent, or process wastewater stream, the pollution prevention measure alone does not have to reduce emissions more than the reference control technology or standard, but the combination of the pollution prevention measure and other controls shall reduce emissions more than if the applicable reference control technology or standard had been applied instead of the pollution prevention measure.

(d) The following emission points cannot be used to generate emissions averaging credits:

(1) Emission points already controlled on or before November 15, 1990 cannot be used to generate credits unless the level of control was increased after November 15, 1990. In this case, credit will be allowed only for the increase in control after November 15, 1990.

(2) Group 1 emission points, identified in paragraph (c)(2) of this section, that are controlled by a reference control technology cannot be used to generate credits unless the reference control technology has been approved for use in a different manner and a higher nominal efficiency has been assigned according to the procedures in paragraph (i) of this section.

(3) Emission points on nonoperating EPPU cannot be used to generate credits. EPPU that are shutdown cannot be used to generate credits or debits.

(4) Maintenance wastewater cannot be used to generate credits. Wastewater streams treated in biological treatment units cannot be used to generate credits. These two types of wastewater cannot be used to generate credits or debits. For the purposes of this section, the terms wastewater and wastewater stream are used to mean process wastewater.

(5) Emission points controlled to comply with a State or Federal rule other than this subpart cannot be used to generate credits, unless the level of control has been increased after November 15, 1990 to a level 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 emission point is subsequently made subject to a State or Federal rule other than this subpart, the emission point may continue to generate emissions averaging credit for the purpose of complying with the previously approved emissions average.

(e) For all emission points included in an emissions average, the owner or operator shall perform the following tasks:

(1) Calculate and record monthly debits for all Group 1 emission points that are controlled to a level less stringent than the reference control technology or standard for those emission points. The Group 1 emission points are identified in paragraphs (c)(2) through (c)(4) of this section. Equations in paragraph (g) of this section shall be used to calculate debits.

(2) 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) of this section shall be used to calculate credits. Emission points and controls that meet the criteria of paragraph (c) of this section may be included in the credit calculation, whereas those described in paragraph (d) of this section shall not be included.

(3) Demonstrate that annual credits calculated according to paragraph (h) of this section are greater than or equal to debits calculated for the same annual compliance period according to paragraph (g) of this section.

(i) The owner or operator may choose to include more than the required number of credit-generating emission points in an emissions average in order to increase the likelihood of being in compliance.

(ii) 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 debits from the debit-generating emission points shall be made under representative operating conditions. After the compliance date, actual operating data shall be used for all debit and credit calculations.

(4) Demonstrate that debits calculated for a quarterly (3-month) period according to paragraph (g) of this section are not more than 1.30 times the credits for the same period calculated according to paragraph (h) 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.

(5) Record and report quarterly and annual credits and debits in the Periodic Reports as specified in § 63.506(e)(6). Every fourth Periodic Report shall include a certification of compliance with the emissions averaging provisions as required by § 63.506(e)(6)(x)(C)(2).

(f) Debits and credits shall be calculated in accordance with the methods and procedures specified in paragraphs (g) and (h) of this section, respectively, and shall not include emissions during the following periods:

(1) [Reserved]

(2) Emissions during periods of monitoring excursions, as defined in § 63.505 (g) or (h). For these periods, the calculation of monthly credits and debits shall be adjusted as specified in paragraphs (f)(2)(i) through (f)(2)(iii) of this section.

(i) No credits would be assigned to the credit-generating emission point.

(ii) Maximum debits would 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 paragraph (1) of this section.

(g) Debits are generated by the difference between the actual emissions from a Group 1 emission point that is uncontrolled or is controlled to a level

less stringent than the applicable reference control technology or standard and the emissions allowed for the Group 1 emission point. Debits shall be calculated as follows:

(1) Source-wide debits shall be calculated using Equation 33. Debits and all terms of the equation are in units of megagrams per month (Mg/month):

$$\begin{aligned} \text{Debits} = & \sum_{i=1}^n (\text{ECFEPV}_{i\text{ACTUAL}} - (0.02) \text{ECFEPV}_{i\text{w}}) + \sum_{i=1}^n (\text{ES}_{i\text{ACTUAL}} - (0.05) \text{ES}_{i\text{w}}) \\ & + (\text{EBEP}_{\text{ACTUAL}} - \text{EBEP}_{\text{c}}) + \sum_{i=1}^n (\text{EWW}_{i\text{ACTUAL}} - \text{EWW}_{i\text{c}}) \\ & + \sum_{i=1}^n (\text{EBFEPV}_{i\text{ACTUAL}} - (0.1) \text{EBFEPV}_{i\text{w}}) + \sum_{i=1}^n (\text{EABV}_{i\text{ACTUAL}} - (0.1) \text{EABV}_{i\text{w}}) \quad [\text{Eq. 33}] \end{aligned}$$

Where:

$\text{ECFEPV}_{i\text{ACTUAL}}$  = Emissions from each Group 1 continuous front-end process vent *i* that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology.  $\text{ECFEPV}_{i\text{ACTUAL}}$  is calculated according to paragraph (g)(2)(iii) of this section.

$(0.02)\text{ECFEPV}_{i\text{w}}$  = Emissions from each Group 1 continuous front-end process vent *i* if the applicable reference control technology had been applied to the uncontrolled emissions.  $\text{ECFEPV}_{i\text{w}}$  is calculated according to paragraph (g)(2)(ii) of this section.

$\text{ES}_{i\text{ACTUAL}}$  = Emissions from each Group 1 storage vessel *i* that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology or standard.  $\text{ES}_{i\text{ACTUAL}}$  is calculated according to paragraph (g)(3) of this section.

$(0.05)\text{ES}_{i\text{w}}$  = Emissions from each Group 1 storage vessel *i* if the applicable reference control technology or standard had been applied to the uncontrolled emissions.  $\text{ES}_{i\text{w}}$  is calculated according to paragraph (g)(3) of this section.

$\text{EBEP}_{\text{ACTUAL}}$  = Emissions from back-end process operations that do not meet the residual organic HAP limits in §63.494.  $\text{EBEP}_{\text{ACTUAL}}$  is calculated according to paragraph (g)(4)(i) of this section.

$\text{EBEP}_{\text{c}}$  = Emissions from back-end process operations if the residual organic HAP limits in §63.494(a) were met.  $\text{EBEP}_{\text{c}}$  is calculated according to paragraph (g)(4)(ii) of this section.

$\text{EWW}_{i\text{ACTUAL}}$  = Emissions from each Group 1 wastewater stream *i* that is uncontrolled or is controlled to a level less stringent than the applicable reference control technology.  $\text{EWW}_{i\text{ACTUAL}}$  is calculated according to paragraph (g)(5) of this section.

$\text{EWW}_{i\text{c}}$  = Emissions from each Group 1 wastewater stream *i* if the reference control technology had been applied to the uncontrolled emissions.  $\text{EWW}_{i\text{c}}$  is calculated according to paragraph (g)(5) of this section.

$\text{EBFEPV}_{i\text{ACTUAL}}$  = Emissions from each Group 1 batch front-end process vent stream *i* that is uncontrolled or is controlled to a level less stringent than the applicable standard.  $\text{EBFEPV}_{i\text{ACTUAL}}$  is calculated according to paragraph (g)(6)(ii) of this section.

$(0.1) \text{EBFEPV}_{i\text{w}}$  = Emissions from each Group 1 batch front-end process vent *i* if the applicable standard had been applied to the uncontrolled emissions.  $\text{EBFEPV}_{i\text{w}}$  is calculated according to paragraph (g)(6)(i) of this section.

$\text{EABV}_{i\text{ACTUAL}}$  = Emissions from each Group 1 aggregate batch vent stream *i* that is uncontrolled or is controlled to a level less stringent than the applicable standard.  $\text{EABV}_{i\text{ACTUAL}}$  is calculated according to paragraph (g)(7)(iii) of this section.

$(0.1) \text{EABV}_{i\text{w}}$  = Emissions from each Group 1 aggregate batch vent stream *i* if the applicable standard had been applied to the uncontrolled emissions.  $\text{EABV}_{i\text{w}}$  is calculated according to paragraph (g)(7)(ii) of this section.

*n* = The number of emission points being included in the emissions average.

(2) Emissions from continuous front-end process vents shall be calculated as follows:

(1) For purposes of determining continuous front-end process vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be after the final product recovery device, if any recovery devices are present; before any control device (for

continuous front-end process vents, recovery devices shall not be considered control devices); and before discharge to the atmosphere, Method 1 or 1A of 40

CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii) ECFEPV<sub>iu</sub> for each continuous front-end process vent i shall be calculated using Equation 34.

$$ECFEPV_{iu} = (2.494 \times 10^{-9}) Qh \left( \sum_{j=1}^n C_j M_j \right) \quad [\text{Eq. 34}]$$

where:

ECFEPV<sub>iu</sub> = Uncontrolled continuous front-end process vent emission rate from continuous front-end process vent i, Mg/month.

Q = Vent stream flow rate, dry standard m<sup>3</sup>/min, measured using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

h = Monthly hours of operation during which positive flow is present in the continuous front-end process vent, hr/month.

C<sub>j</sub> = Concentration, ppmv, dry basis, of organic HAP j as measured by Method 18 or Method 25A of 40 CFR part 60, appendix A.

M<sub>j</sub> = Molecular weight of organic HAP j, gram per gram-mole.

n = Number of organic HAP in stream.

(A) The values of Q and C<sub>j</sub> shall be determined during a performance test conducted under representative operating conditions. The values of Q and C<sub>j</sub> shall be established in the Notification of Compliance Status and shall be updated as provided in paragraph (g)(2)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any

other change is made to the process or product recovery equipment or operation such that the previously measured values of Q and C<sub>j</sub> are no longer representative, a new performance test shall be conducted to determine new representative values of Q and C<sub>j</sub>. These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate ECFEPV<sub>iACTUAL</sub>:

(A) If the continuous front-end process vent is not controlled by a control device or pollution prevention measure, ECFEPV<sub>iACTUAL</sub> = ECFEPV<sub>iu</sub>, where ECFEPV<sub>iu</sub> is calculated according to the procedures contained in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous front-end process vent is controlled using a control device or a pollution prevention measure achieving less than 98-percent reduction, ECFEPV<sub>iACTUAL</sub> is calculated using Equation 35.

$$ECFEPV_{iACTUAL} = ECFEPV_{iu} \times \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 35}]$$

Where:

ECFEPV<sub>iACTUAL</sub> = Emissions from each Group 1 continuous front-end process vent i that is uncontrolled or is controlled to a level less stringent than the reference control technology.

ECFEPV<sub>iu</sub> = Uncontrolled continuous front-end process vent emission rate from continuous front-end process vent i, Mg/month.

(i) The percent reduction shall be measured according to the procedures in § 63.116 if a combustion control device is used. For a flare meeting the criteria in § 63.116(a), or a boiler or process heater meeting the criteria in § 63.116(b), the percent reduction shall be 98 percent. If a noncombustion control device is used, percent reduction

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shall be demonstrated by a performance test at the inlet and outlet of the device, or, if testing is not feasible, by a control design evaluation and documented engineering calculations.

(2) For determining debits from Group 1 continuous front-end process vents, product recovery devices shall not be considered control devices and shall not be assigned a percent reduction in calculating  $ECFEPV_{iACTUAL}$ . The sampling site for measurement of uncontrolled emissions shall be after the final uncontrolled recovery device. However, as provided in §63.113(a)(3), a Group 1 continuous front-end process vent may add sufficient product recovery to raise the TRE index value above 1.0, thereby becoming a Group 2 contin-

uous front-end process vent. Such a continuous front-end process vent is not a Group 1 continuous front-end process vent and should, therefore, not be included in determining debits under this paragraph.

(3) Procedures for calculating the percent reduction of pollution prevention measures are specified in paragraph (j) of this section.

(3) Emissions from storage vessels shall be calculated using the procedures specified in §63.150(g)(3).

(4) Emissions from back-end process operations shall be calculated as follows:

(i) Equation 36 shall be used to calculate  $EBEP_{ACTUAL}$ :

$$EBEP_{ACTUAL} = (1,000) \sum_{i=1}^n (C_i)(P_i) \quad [Eq. 36]$$

where:

$EBEP_{ACTUAL}$  = Actual emissions from back-end process operations, Mg/month.  
 $C_i$  = Residual organic HAP content of sample i, kg organic HAP per Mg latex or dry crumb rubber.

$P_i$  = Weight of latex or dry crumb rubber leaving the stripper represented by sample i, Mg.

(ii) Equation 37 shall be used to calculate  $EBEP_C$ :

$$EBEP_C = (1,000)(HAP_{limit})(P_{month}) \quad [Eq. 37]$$

where:

$EBEP_C$  = Emissions from back-end process operations if the residual organic HAP limits in §63.494(a) were met, Mg/month.  
 $HAP_{limit}$  = Residual organic HAP limits in §63.494 of this subpart, kg organic HAP per Mg latex or dry crumb rubber.  
 $P_{month}$  = Weight of latex or dry crumb rubber leaving the stripper in the month, Mg.

(5) Emissions from wastewater shall be calculated using the procedures specified in §63.150(g)(5).

(6) Emissions from batch front-end process vents shall be calculated as follows:

(1)  $EBFEPV_{iu}$  for each batch front-end process vent i shall be calculated using the procedures specified in §63.488(b).

(ii) The following procedures and equations shall be used to determine  $EBFEPV_{iACTUAL}$ :

(A) If the batch front-end process vent is not controlled by a control device or pollution prevention measure,  $EBFEPV_{iACTUAL} = EBFEPV_{iu}$ , where  $EBFEPV_{iu}$  is calculated according to the procedures in §63.488(b).

(B) If the batch front-end process vent is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction for the batch cycle, calculate  $EBFEPV_{iACTUAL}$  using Equation 38, where percent reduction is for the batch cycle.



$$EBFEPV_{iACTUAL} = EBFEPV_{iu} \times \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 38}]$$

(1) The percent reduction for the batch cycle shall be measured according to the procedures in § 63.490(c)(2).

(2) The percent reduction for control devices shall be calculated according to the procedures in § 63.490 (c)(2)(i) through (c)(2)(iii).

(3) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(7) Emissions from aggregate batch vents shall be calculated as follows:

(1) For purposes of determining aggregate batch vent stream flow rate, organic HAP concentrations, and temperature, the sampling site shall be before any control device and before discharge to the atmosphere. Method 1 or 1A of 40 CFR part 60, appendix A, shall be used for selection of the sampling site.

(ii)  $EABV_{iu}$  for each aggregate batch vent  $i$  shall be calculated using Equation 39.

$$EABV_{iu} = (2.494 \times 10^{-9}) Qh \left( \sum_{j=1}^n C_j M_j \right) \quad [\text{Eq. 39}]$$

where:

$EABV_{iu}$  = Uncontrolled aggregate batch vent emission rate from aggregate batch vent  $i$ , Mg/month.

$Q$  = Vent stream flow rate, dry standard cubic meters per minute, measured using Method 2, 2A, 2C, or 2D of 40 CFR part 60, appendix A, as appropriate.

$h$  = Monthly hours of operation during which positive flow is present from the aggregate batch vent stream, hr/month.

$C_j$  = Concentration, ppmv, dry basis, of organic HAP  $j$  as measured by Method 18 of 40 CFR part 60, appendix A.

$M_j$  = Molecular weight of organic HAP  $j$ , gram per gram-mole.

$n$  = Number of organic HAP in the stream.

(A) The values of  $Q$  and  $C_j$  shall be determined during a performance test conducted under representative operating conditions. The values of  $Q$  and  $C_j$  shall be established in the Notification of Compliance Status and shall be updated as provided in paragraph (g)(7)(ii)(B) of this section.

(B) If there is a change in capacity utilization other than a change in monthly operating hours, or if any other change is made to the process or

product recovery equipment or operation such that the previously measured values of  $Q$  and  $C_j$  are no longer representative, a new performance test shall be conducted to determine new representative values of  $Q$  and  $C_j$ . These new values shall be used to calculate debits and credits from the time of the change forward, and the new values shall be reported in the next Periodic Report.

(iii) The following procedures and equations shall be used to calculate  $EABV_{iACTUAL}$ :

(A) If the aggregate batch vent is not controlled by a control device or pollution prevention measure,  $EABV_{iACTUAL} = EABV_{iu}$ , where  $EABV_{iu}$  is calculated according to the procedures in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream is controlled using a control device or a pollution prevention measure achieving less than 90 percent reduction, calculate  $EABV_{iACTUAL}$  using Equation 40.

$$EABV_{iACTUAL} = EABV_{iu} \times \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 40}]$$

(j) The percent reduction for control devices shall be determined according to the procedures in § 63.490(e).

(2) The percent reduction of pollution prevention measures shall be calculated according to the procedures specified in paragraph (j) of this section.

(h) Credits are generated by the difference between emissions that are allowed for each Group 1 and Group 2 emission point and the actual emis-

sions from that Group 1 or Group 2 emission point that has been controlled after November 15, 1990 to a level more stringent than what is required by this subpart or any other State or Federal rule or statute. Credits shall be calculated as follows:

(1) Source-wide credits shall be calculated using Equation 41. Credits and all terms of the equation are in units of Mg/month, and the baseline date is November 15, 1990:

$$\begin{aligned} \text{Credits} = & D \sum_{i=1}^n ((0.02) ECFEPV1_{iu} - ECFEPV1_{iACTUAL}) + D \sum_{i=1}^n (ECFEPV2_{iBASE} - ECFEPV2_{iACTUAL}) \\ & + D \sum_{i=1}^n ((0.05) ES1_{iu} - ES1_{iACTUAL}) + D \sum_{i=1}^n (ES2_{iBASE} - ES2_{iACTUAL}) + D (EBEP_c) - (EBEP_{ACTUAL}) \\ & + D \sum_{i=1}^n (EWW1_{ic} - EWW1_{iACTUAL}) + D \sum_{i=1}^n (EWW2_{iBASE} - EWW2_{iACTUAL}) \\ & + D \sum_{i=1}^n ((0.1) EBFEPV1_{iu} - EBFEPV1_{iACTUAL}) + D \sum_{i=1}^n ((0.1) EABV1_{iu} - EABV1_{iACTUAL}) \\ & + D \sum_{i=1}^n (EBFEPV2_{iBASE} - EBFEPV2_{iACTUAL}) + D \sum_{i=1}^n (EABV2_{iBASE} - EABV2_{iACTUAL}) \end{aligned} \quad [\text{Eq. 41}]$$

Where:

D = Discount factor = 0.9 for all credit generating emission points, except those controlled by a pollution prevention measure; discount factor = 1.0 for each credit generating emission point controlled by a pollution prevention measure (i.e., no discount provided).

ECFEPV1<sub>iACTUAL</sub> = Emissions from each Group 1 continuous front-end process vent i that is controlled to a level more stringent than the reference control technology. ECFEPV1<sub>iACTUAL</sub> is calculated according to paragraph (h)(2)(ii) of this section.

(0.02)ECFEPV1<sub>iu</sub> = Emissions from each Group 1 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions. ECFEPV1<sub>iu</sub> is calculated according to paragraph (h)(2)(i) of this section.

ECFEPV2<sub>iACTUAL</sub> = Emissions from each Group 2 continuous front-end process vent i that is controlled. ECFEPV2<sub>iACTUAL</sub> is calculated according to paragraph (h)(2)(iii) of this section.

ECFEPV2<sub>iBASE</sub> = Emissions from each Group 2 continuous front-end process vent i at the baseline date. ECFEPV2<sub>iBASE</sub> is calculated in paragraph (h)(2)(iv) of this section.

ES1<sub>iACTUAL</sub> = Emissions from each Group 1 storage vessel i that is controlled to a level more stringent than the reference control technology or standard. ES1<sub>iACTUAL</sub> is calculated according to paragraph (h)(3) of this section.

(0.05) ES1<sub>iu</sub> = Emissions from each Group 1 storage vessel i if the reference control technology had been applied to the uncontrolled emissions. ES1<sub>iu</sub> is calculated according to paragraph (h)(3) of this section.

ES2<sub>iACTUAL</sub> = Emissions from each Group 2 storage vessel i that is controlled. ES2<sub>iACTUAL</sub> is calculated according to paragraph (h)(3) of this section.

ES2<sub>iBASE</sub> = Emissions from each Group 2 storage vessel i at the baseline date. ES2<sub>iBASE</sub> is calculated in paragraph (h)(3) of this section.

EBEP<sub>iACTUAL</sub> = Actual emissions from back-end process operations. Mg/month.

- $EBEP_{ACTUAL}$  is calculated in paragraph (h)(4)(i) of this section.
- $EBEP$  = Emissions from back-end process operations if the residual organic HAP limits in § 63.494(a) were met, Mg/month.  $EBEP$  is calculated in paragraph (h)(4)(ii) of this section.
- $EW1_{ACTUAL}$  = Emissions from each Group 1 wastewater stream  $i$  that is controlled to a level more stringent than the reference control technology.  $EW1_{ACTUAL}$  is calculated according to paragraph (h)(5) of this section.
- $EW1_n$  = Emissions from each Group 1 wastewater stream  $i$  if the reference control technology had been applied to the uncontrolled emissions.  $EW1_n$  is calculated according to paragraph (h)(5) of this section.
- $EW2_{ACTUAL}$  = Emissions from each Group 2 wastewater stream  $i$  that is controlled.  $EW2_{ACTUAL}$  is calculated according to paragraph (h)(5) of this section.
- $EW2_{BASE}$  = Emissions from each Group 2 wastewater stream  $i$  at the baseline date.  $EW2_{BASE}$  is calculated according to paragraph (h)(5) of this section.
- (0.1)  $EBFEPV1_w$  = Emissions from each Group 1 batch front-end process vent  $i$  if the applicable standard had been applied to the uncontrolled emissions.  $EBFEPV1_w$  is calculated according to paragraph (h)(6)(i) of this section.
- $EBFEPV1_{ACTUAL}$  = Emissions from each Group 1 batch front-end process vent  $i$  that is controlled to a level more stringent than the applicable standard.  $EBFEPV1_{ACTUAL}$  is calculated according to paragraph (h)(6)(ii) of this section.
- (0.1)  $EABV1_w$  = Emissions from each Group 1 aggregate batch vent stream  $i$  if the applicable standard had been applied to the uncontrolled emissions.  $EABV1_w$  is calculated according to paragraph (h)(7)(i) of this section.
- $EABV1_{ACTUAL}$  = Emissions from each Group 1 aggregate batch vent stream  $i$  that is controlled to a level more stringent than the applicable standard.  $EABV1_{ACTUAL}$  is calculated according to paragraph (h)(7)(ii) of this section.
- $EBFEPV2_{BASE}$  = Emissions from each Group 2 batch front-end process vent  $i$  at the baseline date.  $EBFEPV2_{BASE}$  is calculated according to paragraph (h)(6)(iv) of this section.
- $EBFEPV2_{ACTUAL}$  = Emissions from each Group 2 batch front-end process vent  $i$  that is controlled.  $EBFEPV2_{ACTUAL}$  is calculated according to paragraph (h)(6)(iii) of this section.
- $EABV2_{BASE}$  = Emissions from each Group 2 aggregate batch vent stream  $i$  at the baseline date.  $EABV2_{BASE}$  is calculated according to paragraph (h)(7)(iv) of this section.
- $EABV2_{ACTUAL}$  = Emissions from each Group 2 aggregate batch vent stream  $i$  that is controlled.  $EABV2_{ACTUAL}$  is calculated according to paragraph (h)(7)(iii) of this section.
- $n$  = Number of Group 1 emission points included in the emissions average. The value of  $n$  is not necessarily the same for continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.
- $m$  = Number of Group 2 emission points included in the emissions average. The value of  $m$  is not necessarily the same for continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, wastewater streams, or the collection of process sections within the affected source.
- (1) Except as specified in paragraph (h)(1)(iv) of this section, for an emission point controlled using a reference control technology, the percent reduction for calculating credits shall be no greater than the nominal efficiency associated with the reference control technology, unless a higher nominal efficiency is assigned as specified in paragraph (h)(1)(i) of this section.
- (ii) For an emission point controlled to a level more stringent than the reference control technology, the nominal efficiency for calculating credits shall be assigned as described in paragraph (1) of this section. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedures in paragraph (1) of this section. A reference control technology may be approved for use in a different manner and assigned a higher nominal efficiency according to the procedure in paragraph (1) of this section.
- (iii) For an emission point controlled using a pollution prevention measure, except for back-end process operation emissions, the nominal efficiency for calculating credits shall be as determined as described in paragraph (j) of this section. Emissions for back-end process operations shall be determined as described in paragraph (h)(4) of this section.
- (iv) For Group 1 and Group 2 batch front-end process vents and Group 1 and Group 2 aggregate batch vent

streams, the percent reduction for calculating credits shall be the percent reduction determined according to the procedures in paragraphs (h)(6)(ii) and (h)(6)(iii) of this section for batch front-end process vents and paragraphs (h)(7)(ii) and (h)(7)(iii) of this section for aggregate batch vent streams.

(2) Emissions from continuous front-end process vents shall be determined as follows:

(i) Uncontrolled emissions from Group 1 continuous front-end process

vents,  $ECFEPV_{1u}$ , shall be calculated according to the procedures and equation for  $ECFEPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(ii) Actual emissions from Group 1 continuous front-end process vents controlled using a technology with an approved nominal efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent emission reduction,  $ECFEPV_{1ACTUAL}$ , shall be calculated using Equation 42.

$$ECFEPV_{1ACTUAL} = ECFEPV_{1u} \left( 1 - \frac{\text{Nominal efficiency \%}}{100\%} \right) \quad [\text{Eq. 42}]$$

Where:

$ECFEPV_{1ACTUAL}$  = Emissions for each Group 1 continuous front-end process vent 1 that is controlled to a level more stringent than the reference control technology.

$ECFEPV_{1u}$  = Emissions from each Group 1 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions.

(iii) The following procedures shall be used to calculate actual emissions

from Group 2 continuous front-end process vents,  $ECFEPV_{2ACTUAL}$ :

(A) For a Group 2 continuous front-end process vent controlled by a control device, a recovery device applied as a pollution prevention project, or a pollution prevention measure, where the control achieves a percent reduction less than or equal to 98 percent reduction, Equation 43 shall be used.

$$ECFEPV_{2ACTUAL} = ECFEPV_{2u} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 43}]$$

Where:

$ECFEPV_{2ACTUAL}$  = Emissions from each Group 2 continuous front-end process vent i that is controlled.

$ECFEPV_{2u}$  = Emissions from each Group 2 continuous front-end process vent i if the reference control technology had been applied to the uncontrolled emissions.

(1)  $ECFEPV_{2u}$  shall be calculated according to the equations and procedures for  $ECFEPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section, except as provided in paragraph (h)(2)(iii)(A)(3) of this section.

(2) The percent reduction shall be calculated according to the procedures in paragraphs (g)(2)(iii)(B)(1) through (g)(2)(iii)(B)(3) of this section, except as

provided in paragraph (h)(2)(iii)(A)(4) of this section.

(3) If a recovery device was added as part of a pollution prevention project,  $ECFEPV_{2u}$  shall be calculated prior to that recovery device. The equation for  $ECFEPV_{iu}$  in paragraph (g)(2)(ii) of this section shall be used to calculate  $ECFEPV_{2u}$ ; however, the sampling site for measurement of vent stream flow rate and organic HAP concentration shall be at the inlet of the recovery device.

(4) If a recovery device was added as part of a pollution prevention project, the percent reduction shall be demonstrated by conducting a performance

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test at the inlet and outlet of that recovery device.

(B) For a Group 2 continuous front-end process vent controlled using a technology with an approved nominal

efficiency greater than 98 percent or a pollution prevention measure achieving greater than 98 percent reduction, Equation 44 shall be used.

$$ECFEPV_{2,ACTUAL} = ECFEPV_{2,iu} \left( 1 - \frac{\text{Nominal efficiency \%}}{100\%} \right) \quad [\text{Eq. 44}]$$

Where:

$ECFEPV_{2,ACTUAL}$  = Emissions from each Group 2 continuous front-end process vent  $i$  that is controlled.  
 $ECFEPV_{2,iu}$  = Emissions from each Group 2 continuous front-end process vent  $i$  if the reference control technology had been applied to the uncontrolled emissions.

(iv) Emissions from Group 2 continuous front-end process vents at baseline,  $ECFEPV_{2,BASE}$ , shall be calculated as follows:

(A) If the continuous front-end process vent was uncontrolled on November 15, 1990,  $ECFEPV_{2,BASE} = ECFEPV_{2,iu}$  and shall be calculated according to the procedures and equation for  $ECFEPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(B) If the continuous front-end process vent was controlled on November 15, 1990, Equation 45 shall be used.

$$ECFEPV_{2,BASE} = ECFEPV_{2,iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 45}]$$

(1)  $ECFEPV_{2,iu}$  is calculated according to the procedures and equation for  $ECFEPV_{iu}$  in paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(2) The percent reduction shall be calculated according to the procedures specified in paragraphs (g)(2)(iii)(B)(1) through (g)(2)(iii)(B)(3) of this section.

(C) If a recovery device was added as part of a pollution prevention project initiated after November 15, 1990,  $ECFEPV_{2,BASE} = ECFEPV_{2,iu}$ , where  $ECFEPV_{2,iu}$  is calculated according to paragraph (h)(2)(iii)(A)(3) of this section.

(3) Emissions from storage vessels shall be calculated using the procedures specified in § 63.150(h)(3).

(4) Emissions from back-end process operations shall be calculated as follows:

(1)  $EBEP_{ACTUAL}$  shall be calculated according to the equation for  $EBEP_{ACTUAL}$

contained in paragraph (g)(4)(i) of this section.

(ii)  $EBEP_c$  shall be calculated according to the equation for  $EBEP_c$  contained in paragraph (g)(4)(ii) of this section.

(5) Emissions from wastewater streams shall be calculated using the procedures specified in § 63.150(h)(5).

(6) Emissions from batch front-end process vents shall be determined as follows:

(1) Uncontrolled emissions from Group 1 batch front-end process vents ( $EBFEPV_{1,iu}$ ) shall be calculated according to the procedures specified in § 63.488(b).

(ii) Actual emissions from Group 1 batch front-end process vents controlled to a level more stringent than the standard ( $EBFEPV_{1,ACTUAL}$ ) shall be calculated using Equation 46, where percent reduction is for the batch cycle:

$$EBFEPV1_{iACTUAL} = EBFEPV1_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 46}]$$

(A) The percent reduction for the batch cycle shall be calculated according to the procedures in § 63.490(c)(2).

(B) The percent reduction for control devices shall be determined according to the procedures in § 63.490(c)(2)(i) through (c)(2)(iii).

(C) The percent reduction of pollution prevention measures shall be calculated using the procedures specified

in paragraph (j) of this section.

(iii) Actual emissions from Group 2 batch front-end process vents ( $EBFEPV2_{iACTUAL}$ ) shall be calculated using Equation 47 and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section.  $EBFEPV2_{iu}$  shall be calculated using the procedures specified in § 63.488(b).

$$EBFEPV2_{iACTUAL} = EBFEPV2_{iu} \times \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 47}]$$

(iv) Emissions from Group 2 batch front-end process vents at baseline shall be calculated as follows:

(A) If the batch front-end process vent was uncontrolled on November 15, 1990,  $EBFEPV2_{iBASE} = EBFEPV2_{iu}$  and shall be calculated according to the procedures using the procedures specified in § 63.488(b).

(B) If the batch front-end process vent was controlled on November 15, 1990, use Equation 48 and the procedures in paragraphs (h)(6)(ii)(A) through (h)(6)(ii)(C) of this section.  $EBFEPV2_{iu}$  shall be calculated using the procedures specified in § 63.488(b).

$$EBFEPV2_{iBASE} = EBFEPV2_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 48}]$$

(7) Emissions from aggregate batch vent streams shall be determined as follows:

(i) Uncontrolled emissions from Group 1 aggregate batch vent streams ( $EABV1_{iu}$ ) shall be calculated according to the procedures and equation for

$EABV_{iu}$  in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

(ii) Actual emissions from Group 1 aggregate batch vent streams controlled to a level more stringent than the standard ( $EABV1_{iACTUAL}$ ) shall be calculated using Equation 49:

$$EABV1_{iACTUAL} = EABV1_{iu} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 49}]$$

(A) The percent reduction for control devices shall be determined according to the procedures in § 63.490(e).

(B) The percent reduction of pollution prevention measures shall be calculated using the procedures specified in paragraph (j) of this section.

(iii) Actual emissions from Group 2 aggregate batch vents streams ( $EABV_{2,ACTUAL}$ ) shall be calculated using Equation 50 and the procedures in paragraphs (h)(7)(ii)(A) through

(h)(7)(ii)(B) of this section.  $EABV_{2,u}$  shall be calculated according to the equations and procedures for  $EABV_{i,u}$  in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV_{2,ACTUAL} = EABV_{2,u} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 50}]$$

(iv) Emissions from Group 2 aggregate batch vent streams at baseline shall be calculated as follows:

(A) If the aggregate batch vent stream was uncontrolled on November 15, 1990,  $EABV_{2,BASE} = EABV_{2,u}$  and shall be calculated according to the procedures and equation for  $EABV_{i,u}$  in paragraph (g)(7)(i) and (g)(7)(ii) of this section.

(B) If the aggregate batch vent stream was controlled on November 15, 1990, use Equation 51 and the procedures in paragraphs (h)(7)(ii)(A) through (h)(7)(ii)(B) of this section.  $EABV_{2,u}$  shall be calculated according to the equations and procedures for  $EABV_{i,u}$  in paragraphs (g)(7)(i) and (g)(7)(ii) of this section.

$$EABV_{2,BASE} = EABV_{2,u} \left( 1 - \frac{\text{Percent reduction}}{100\%} \right) \quad [\text{Eq. 51}]$$

(1) The following procedures shall be followed to establish nominal efficiencies for emission controls for storage vessels, continuous front-end process vents, and process wastewater streams. The procedures in paragraphs (i)(1) through (i)(6) of this section shall be followed for control technologies that are different in use or design from the reference control technologies and achieve greater percent reductions than the percent efficiencies assigned to the reference control technologies in § 63.111.

(1) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology, and the different control technology will be used in more than three applications at a single plant-site, the owner or operator shall submit the information specified in paragraphs (i)(1)(i) through (i)(1)(iv) of this section, as specified in § 63.506(e)(7)(ii), to the Director of the EPA Office of Air Quality Planning and Standards, in writing.

(1) Emission stream characteristics of each emission point to which the control technology is or will be applied, including the kind of emission point, flow, organic HAP concentration, and all other stream characteristics necessary to design the control technology or determine its performance.

(ii) Description of the control technology, including design specifications.

(iii) Documentation demonstrating to the Administrator's satisfaction the control efficiency of the control technology. This may include performance test data collected using an appropriate EPA Method or any other method validated according to Method 301, 40 CFR part 63, appendix A. If it is infeasible to obtain test data, documentation may include a design evaluation and calculations. The engineering basis of the calculation procedures and all inputs and assumptions made in the calculations shall be documented.

(iv) A description of the parameter or parameters to be monitored to ensure

that the control technology will be operated in conformance with its design and an explanation of the criteria used for selection of that parameter (or parameters).

(2) The Administrator shall determine within 120 days whether an application presents sufficient information to determine nominal efficiency. The Administrator reserves the right to request specific data in addition to the items listed in paragraph (1)(1) of this section.

(3) The Administrator shall determine within 120 days of the submittal of sufficient data whether a control technology shall have a nominal efficiency and the level of that nominal efficiency. If, in the Administrator's judgment, the control technology achieves a level of emission reduction greater than the reference control technology for a particular kind of emission point, the Administrator will publish a FEDERAL REGISTER notice establishing a nominal efficiency for the control technology.

(4) The Administrator may grant permission to take emission credits for use of the control technology. The Administrator may also impose requirements that may be necessary to ensure operation and maintenance to achieve the specified nominal efficiency.

(5) In those cases where the owner or operator is seeking permission to take credit for use of a control technology that is different in use or design from the reference control technology and the different control technology will be used in no more than three applications at a single plant site, the owner or operator shall submit the information listed in paragraph (1)(1)(1) as specified in §63.506(e)(7)(1) to the Administrator.

(1) In these instances, use and conditions for use of the control technology may be approved by the permitting authority as part of an operating permit application or modification. The permitting authority shall follow the procedures specified in paragraphs (1)(2) through (1)(4) of this section except that, in these instances, a FEDERAL REGISTER notice is not required to establish the nominal efficiency for the different technology.

(1) If, in reviewing the application, the permitting authority believes the control technology has broad applicability for use by other sources, the permitting authority shall submit the information provided in the application to the Director of the EPA Office of Air Quality Planning and Standards. The Administrator shall review the technology for broad applicability and may publish a FEDERAL REGISTER notice; however, this review shall not affect the permitting authority's approval of the nominal efficiency of the control technology for the specific application.

(6) If, in reviewing an application for a control technology for an emission point, the Administrator or permitting authority determines that the control technology is not different in use or design from the reference control technology, the Administrator or permitting authority shall deny the application.

(j) The following procedures shall be used for calculating the efficiency (percent reduction) of pollution prevention measures for storage vessels, continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, and wastewater streams:

(1) A pollution prevention measure is any practice which meets the criteria of paragraphs (j)(1)(1) and (j)(1)(1) of this section.

(1) A pollution prevention measure is any practice that results in a lesser quantity of organic HAP emissions per unit of product released to the atmosphere prior to out-of-process recycling, treatment, or control of emissions, while the same product is produced.

(1) Pollution prevention measures may include substitution of feedstocks that reduce organic HAP emissions; alterations to the production process to reduce the volume of materials released to the environment; equipment modifications; housekeeping measures; and in-process recycling that returns waste materials directly to production as raw materials. Production cutbacks do not qualify as pollution prevention.

(2) The emission reduction efficiency of pollution prevention measures implemented after November 15, 1990, may be used in calculating the actual emissions from an emission point in the



debit and credit equations in paragraphs (g) and (h) of this section.

(1) For pollution prevention measures, the percent reduction is used in the equations in paragraphs (g)(2) through (g)(7) of this section and paragraphs (h)(2) through (h)(7) of this section is the percent difference between the monthly organic HAP emissions for each emission point after the pollution

prevention measure for the most recent month versus monthly emissions from the same emission point before the pollution prevention measure, adjusted by the volume of product produced during the two monthly periods.

(ii) Equation 52 shall be used to calculate the percent reduction of a pollution prevention measure for each emission point.

$$\text{Percent reduction} = E_B - \frac{\left( \frac{E_{PP} \times P_B}{P_{PP}} \right)}{E_B} \times 100 \quad [\text{Eq. 52}]$$

where:

Percent reduction = Efficiency of pollution prevention measure (percent organic HAP reduction).

$E_B$  = Monthly emissions before the pollution prevention measure, Mg/month, determined as specified in paragraphs (j)(2)(i)(A), (j)(2)(i)(B), and (j)(2)(i)(C) of this section.

$E_{PP}$  = Monthly emissions after the pollution prevention measure, Mg/month, as determined for the most recent month, determined as specified in either paragraphs (j)(2)(i)(D) or (j)(2)(i)(E) of this section.

$P_B$  = Monthly production before the pollution prevention measure, Mg/month, during the same period over which  $E_B$  is calculated.

$P_{PP}$  = Monthly production after the pollution prevention measure, Mg/month, as determined for the most recent month.

(A) The monthly emissions before the pollution prevention measure,  $E_B$ , shall be determined in a manner consistent with the equations and procedures in paragraph (g)(2) of this section for continuous front-end process vents, paragraph (g)(3) of this section for storage vessels, paragraph (g)(6) of this section for batch front-end process vents, and paragraph (g)(7) of this section for aggregate batch vent streams.

(B) For wastewater,  $E_B$  shall be calculated according to § 63.150(j)(2)(i)(B).

(C) If the pollution prevention measure was implemented prior to September 5, 1996, records may be used to determine  $E_B$ .

(D) The monthly emissions after the pollution prevention measure,  $E_{PP}$ , may

be determined during a performance test or by a design evaluation and documented engineering calculations. Once an emissions-to-production ratio has been established, the ratio may be used to estimate monthly emissions from monthly production records.

(E) For wastewater,  $E_{PP}$  shall be calculated according to § 63.150(j)(2)(i)(E).

(iii) All equations, calculations, test procedures, test results, and other information used to determine the percent reduction achieved by a pollution prevention measure for each emission point shall be fully documented.

(iv) The same pollution prevention measure may reduce emissions from multiple emission points. In such cases, the percent reduction in emissions for each emission point shall be calculated.

(v) For the purposes of the equations in paragraphs (h)(2) through (h)(7) of this section, used to calculate credits for emission points controlled more stringently than the reference control technology or standard, the nominal efficiency of a pollution prevention measure is equivalent to the percent reduction of the pollution prevention measure. When a pollution prevention measure is used, the owner or operator of an affected source is not required to apply to the Administrator for a nominal efficiency and is not subject to paragraph (i) of this section.

(k) The owner or operator shall demonstrate that the emissions from the

emission points proposed to be included in the emissions average will not result in greater hazard, or at the option of the Administrator, greater risk to human health or the environment than if the emission points were controlled according to the provisions in §§ 63.484, 63.485, 63.486, 63.493, and 63.501.

(1) This demonstration of hazard or risk equivalency shall be made to the satisfaction of the Administrator.

(i) The Administrator may require owners and operators to use specific methodologies and procedures for making a hazard or risk determination.

(ii) The demonstration and approval of hazard or risk equivalency shall be made according to any guidance that the Administrator makes available for use.

(2) Owners and operators shall provide documentation demonstrating the hazard or risk equivalency of their proposed emissions average in their operating permit application or in their Emissions Averaging Plan if an operating permit application has not yet been submitted.

(3) 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 emissions 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 §§ 63.484, 63.485, 63.486, 63.493, and 63.501.

(4) A hazard or risk equivalency demonstration shall:

(i) Be a quantitative, bona fide chemical hazard or risk assessment;

(ii) Account for differences in chemical hazard or risk to human health or the environment; and

(iii) Meet any requirements set by the Administrator for such demonstrations.

(1) For periods of monitoring excursions, an owner or operator may request that the provisions of paragraphs (1)(1) through (1)(4) of this section be followed instead of the procedures in paragraphs (1)(2)(i) and (1)(2)(ii) of this section.

(1) The owner or operator shall notify the Administrator of monitoring excursions in the Periodic Reports as required in § 63.506(e)(6).

(2) The owner or operator shall demonstrate that other types of monitoring data or engineering calculations are appropriate to establish that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits. This demonstration shall be made to the Administrator's satisfaction, and the Administrator may establish procedures for demonstrating compliance that are acceptable.

(3) The owner or operator shall provide documentation of the excursion and the other types of monitoring data or engineering calculations to be used to demonstrate that the control device for the emission point was operating in such a fashion to warrant assigning full or partial credits and debits.

(4) The Administrator may assign full or partial credit and debits upon review of the information provided.

(m) For each emission point included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for Group 1 emission points, complying with §§ 63.484, 63.485, 63.486, 63.493, and 63.501, as applicable. If back-end process operations are included in an emissions average, the owner or operator shall perform testing, monitoring, recordkeeping, and reporting equivalent to that required for back-end process operations complying with § 63.493. The specific requirements for continuous front-end process vents, batch front-end process vents, aggregate batch vent streams, storage vessels, back-end process operations, and wastewater are identified in paragraphs (m)(1) through (m)(6) of this section.

(1) For each continuous front-end process vent equipped with a flare, incinerator, boiler, or process heater, as appropriate to the control technique:

(i) Determine whether the continuous front-end process vent is Group 1 or Group 2 according to the procedures specified in § 63.115 and as required by § 63.485:

(ii) Conduct initial performance tests to determine percent reduction as specified in § 63.116 and as required by § 63.485; and

(iii) Monitor the operating parameters, keep records, and submit reports as specified in §§ 63.114, 63.117(a), and 63.118(a) and (f), as required, for the specific control device as required by § 63.485.

(2) For each continuous front-end process vent equipped with a carbon adsorber, absorber, or condenser but not equipped with a control device, as appropriate to the control technique:

(i) Determine the flow rate, organic HAP concentration, and TRE index value according to the procedures specified in § 63.115; and

(ii) Monitor the operating parameters, keep records, and submit reports according to the procedures specified in §§ 63.114, 63.117(a), and 63.118(b) and (f), as required, for the specific recovery device, and as required by § 63.485.

(3) For each storage vessel controlled with an internal floating roof, external roof, or a closed vent system with a control device, as appropriate to the control technique:

(i) Perform the monitoring or inspection procedures according to the procedures specified in § 63.120, and as required by § 63.484;

(ii) Perform the reporting and record-keeping procedures according to the procedures specified in §§ 63.122 and 63.123, and as required by § 63.484; and

(iii) For closed vent systems with control devices, conduct an initial design evaluation and submit an operating plan according to the procedures specified in § 63.120(d) and § 63.122(b), and as required by § 63.484.

(4) For back-end process operations included in an emissions average:

(i) If stripping technology, and no control or recovery device, is used to reduce back-end process operation emissions, the owner or operator shall implement the following portions of this subpart:

(A) Paragraphs (b)(1), (b)(2), and (b)(3) of § 63.495, paragraph (b) of § 63.498, and the applicable provisions of § 63.499, or

(B) Paragraphs (c)(1), (2), and (3) of § 63.495, paragraph (c) of § 63.498, and the applicable provisions of § 63.499;

(ii) If a control or recovery device is used to reduce back-end process operation emissions, the owner or operator of the affected source shall comply with §§ 63.496, 63.497, 63.498(d), and the applicable provisions of 63.499, and shall implement the provisions of these sections.

(5) For wastewater emission points, as appropriate to the control techniques:

(i) For wastewater treatment processes, conduct tests according to the procedures specified in § 63.138(i) and (j), and as required by § 63.501;

(ii) Conduct inspections and monitoring according to the procedures specified in § 63.143, and as required by § 63.501;

(iii) Implement a recordkeeping program according to the procedures specified in § 63.147, and as required by § 63.501; and

(iv) Implement a reporting program according to the procedures specified in § 63.146, and as required by § 63.501.

(6) For each batch front-end process vent and aggregate batch vent stream equipped with a control device, as appropriate to the control technique:

(i) Determine whether the batch front-end process vent or aggregate batch vent stream is Group 1 or Group 2 according to the procedures specified in § 63.488;

(ii) Conduct performance tests according to the procedures specified in § 63.490;

(iii) Conduct monitoring according to the procedures specified in § 63.489; and

(iv) Perform the recordkeeping and reporting procedures according to the procedures specified in §§ 63.491 and 63.492.

(7) If an emission point in an emissions average is controlled using a pollution prevention measure or a device or technique for which no monitoring parameters or inspection procedures are required by §§ 63.484, 63.485, 63.486, 63.493, or § 63.501, the owner or operator shall submit the information specified in § 63.506(f) for alternate monitoring parameters or inspection procedures in the Emissions Averaging Plan or operating permit application.

(n) Records of all information required to calculate emission debits and credits shall be retained for 5 years.

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(c) Precompliance Reports, Emission Averaging Plans, Notifications of Compliance Status, Periodic Reports, and other reports shall be submitted as required by § 63.506.

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11543, Mar. 9, 1999; 65 FR 38071, June 19, 2000; 76 FR 22592, Apr. 21, 2011]

### § 63.504 Additional requirements for performance testing.

(a) Performance testing shall be conducted in accordance with § 63.7(a)(1), (a)(3), (d), (e)(1), (e)(2), (e)(4), (g), and (h), with the exceptions specified in paragraphs (a)(1) through (a)(5) of this section and the additions specified in paragraph (b) of this section. Sections 63.484 through 63.501 also contain specific testing requirements.

(1) Performance tests shall be conducted at maximum representative operating conditions achievable during one of the time periods described in paragraph (a)(1)(i) of this section, without causing any of the situations described in paragraph (a)(1)(ii) of this section to occur. 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.

(i) The 6-month period that ends 2 months before the Notification of Compliance Status is due, according to § 63.506(e)(5); or the 6-month period that begins 3 months before the performance test and ends 3 months after the performance test.

(ii) Causing damage to equipment; necessitating that the owner or operator make product that does not meet an existing specification for sale to a customer; or necessitating that the owner or operator make product in excess of demand.

(2) References in § 63.7(g) to the Notification of Compliance Status requirements in § 63.9(h) shall refer to the requirements in § 63.506(e)(5).

(3) Because the site-specific test plans in § 63.7(c)(3) are not required, § 63.7(h)(4)(ii) is not applicable.

(4) The owner or operator shall notify the Administrator of the intent to conduct a performance test at least 30 days before the performance test is scheduled, to allow the Administrator the opportunity to have an observer

present during the test. If after 30 days notice for an initially scheduled performance test, there is a delay (due to operational problems, etc.) in conducting the scheduled performance test, the owner or operator of an affected facility shall notify the Administrator as soon as possible of any delay in the original test date, either by providing at least 7 days prior notice of the rescheduled date of the performance test, or by arranging a rescheduled date with the Administrator by mutual agreement.

(5) Performance tests shall be performed no later than 150 days after the compliance dates specified in this subpart (i.e., in time for the results to be included in the Notification of Compliance Status), rather than according to the time periods in § 63.7(a)(2).

(b) Data shall be reduced in accordance with the EPA approved methods specified in the applicable subpart or, if other test methods are used, the data and methods shall be validated according to the protocol in Method 301, 40 CFR part 63, appendix A.

(c) Notwithstanding any other provision of this subpart, if an owner or operator of an affected source uses a flare to comply with any of the requirements of this subpart, the owner or operator shall comply with paragraphs (c)(1) through (c)(3) of this section. The owner or operator is not required to conduct a performance test to determine percent emission reduction or outlet organic HAP or TOC concentration. If a compliance demonstration has been conducted previously for a flare, using the techniques specified in paragraphs (c)(1) through (c)(3) of this section, that compliance demonstration may be used to satisfy the requirements of this paragraph if either no deliberate process changes have been made since the compliance demonstration, or the results of the compliance demonstration reliably demonstrate compliance despite process changes.

(1) Conduct a visible emission test using the techniques specified in § 63.11(b)(4);

(2) Determine the net heating value of the gas being combusted, using the techniques specified in § 63.11(b)(6); and

(3) Determine the exit velocity using the techniques specified in either

§ 63.11(b)(7)(i) (and § 63.11(b)(7)(iii), where applicable) or § 63.11(b)(8), as appropriate.

[65 FR 38073, June 19, 2000, as amended at 76 FR 22592, Apr. 21, 2011]

**§ 63.505 Parameter monitoring levels and excursions.**

(a) *Establishment of parameter monitoring levels.* The owner or operator of a control or recovery device that has one or more parameter monitoring level requirements specified under this subpart shall establish a maximum or minimum level for each measured parameter. If a performance test is required by this subpart for a control device, the owner or operator shall use the procedures in either paragraph (b) or (c) of this section to establish the parameter monitoring level(s). If a performance test is not required by this subpart for a control device, the owner or operator may use the procedures in paragraph (b), (c), or (d) of this section to establish the parameter monitoring levels. When using the procedures specified in paragraph (c) or (d) of this section, the owner or operator shall submit the information specified in § 63.506(e)(3)(vii) for review and approval, as part of the Precompliance Report.

(1) The owner or operator shall operate control and recovery devices such that the daily average of monitored parameters remains above the minimum established level or below the maximum established level, except as otherwise stated in this subpart.

(2) As specified in § 63.506(e)(5), all established levels, along with their supporting documentation and the definition of an operating day, shall be submitted as part of the Notification of Compliance Status.

(3) Nothing in this section shall be construed to allow a monitoring parameter excursion caused by an activity that violates other applicable provisions of subpart A, F, G, or H of this part.

(b) *Establishment of parameter monitoring levels based exclusively on performance tests.* In cases where a performance test is required by this subpart, or the owner or operator of the affected source elects to do a performance test in accordance with the provisions of

this subpart, and an owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device based exclusively on parameter values measured during the performance test, the owner or operator of the affected source shall comply with the procedures in paragraphs (b)(1) through (b)(4) of this section, as applicable.

(1) [Reserved]

(2) *Back-end process operations using a control or recovery device to comply with §§ 63.493 through 63.500 and continuous front-end process vents.* During initial compliance testing, the appropriate parameter shall be continuously monitored during the required 1-hour runs. The monitoring level(s) shall then be established as the average of the maximum (or minimum) point values from the three test runs. The average of the maximum values shall be used when establishing a maximum level, and the average of the minimum values shall be used when establishing a minimum level.

(3) *Batch front-end process vents.* The monitoring level(s) shall be established using the procedures specified in either paragraph (b)(3)(i) or (b)(3)(ii) of this section. The procedures specified in this paragraph (b)(3) may only be used if the batch emission episodes, or portions thereof, selected to be controlled were tested, and monitoring data were collected, during the entire period in which emissions were vented to the control device, as specified in § 63.490(c)(1)(i). If the owner or operator chose to test only a portion of the batch emission episode, or portion thereof, selected to be controlled, the procedures in paragraph (c) of this section shall be used.

(i) If more than one batch emission episode or more than one portion of a batch emission episode has been selected to be controlled, a single level for the batch cycle shall be calculated as follows:

(A) The average monitored parameter value shall be calculated for each batch emission episode, or portion thereof, in the batch cycle selected to be controlled. The average shall be based on all values measured during the required performance test.

(B) If the level to be established is a maximum operating parameter, the level shall be defined as the minimum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled (i.e., identify the emission episode, or portion thereof, which requires the lowest parameter value in order to assure compliance. The average parameter value that is necessary to assure compliance for that emission episode, or portion thereof, shall be the level for all emission episodes, or portions thereof, in the batch cycle, that are selected to be controlled).

(C) If the level to be established is a minimum operating parameter, the level shall be defined as the maximum of the average parameter values of the batch emission episodes, or portions thereof, in the batch cycle selected to be controlled (i.e., identify the emission episode, or portion thereof, which requires the highest parameter value in order to assure compliance. The average parameter value that is necessary to assure compliance for that emission episode, or portion thereof, shall be the level for all emission episodes, or portions thereof, in the batch cycle, that are selected to be controlled).

(D) Alternatively, an average monitored parameter value shall be calculated for the entire batch cycle based on all values measured during each batch emission episode, or portion thereof, selected to be controlled.

(i) Instead of establishing a single level for the batch cycle, as described in paragraph (b)(3)(1) of this section, an owner or operator may establish separate levels for each batch emission episode, or portion thereof, selected to be controlled. Each level shall be determined as specified in paragraph (b)(3)(1)(A) of this section.

(ii) The batch cycle shall be defined in the Notification of Compliance Status, as specified in § 63.506(e)(5). The definition shall include an identification of each batch emission episode and the information required to determine parameter monitoring compliance for partial batch cycles (i.e., when part of a batch cycle is accomplished during two different operating days).

(4) *Aggregate batch vent streams.* For aggregate batch vent streams, the

monitoring level shall be established in accordance with paragraph (b)(2) of this section.

(c) *Establishment of parameter monitoring levels based on performance tests, supplemented by engineering assessments and/or manufacturer's recommendations.* In cases where a performance test is required by this subpart, or the owner or operator elects to do a performance test in accordance with the provisions of this subpart, and the owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device under this paragraph (c), the owner or operator shall supplement the parameter values measured during the performance test with engineering assessments and/or manufacturer's recommendations. Performance testing is not required to be conducted over the entire range of expected parameter values.

(d) *Establishment of parameter monitoring based on engineering assessments and/or manufacturer's recommendations.* In cases where a performance test is not required by this subpart and an owner or operator elects to establish a parameter monitoring level for a control, recovery, or recapture device under this paragraph (d), the determination of the parameter monitoring level shall be based exclusively on engineering assessments and/or manufacturer's recommendations.

(e) *Demonstration of compliance with back-end process provisions using stripper parameter monitoring.* If the owner or operator is demonstrating compliance with § 63.495 using stripper parameter monitoring, stripper parameter levels shall be established for each grade in accordance with paragraphs (e)(1) and (e)(2) of this section. A single set of stripper parameter levels may be representative of multiple grades.

(1) For each grade, the owner or operator shall calculate the residual organic HAP content using the procedures in paragraphs (e)(1)(i) and (e)(1)(ii) of this section.

(i) The location of the sampling shall be in accordance with § 63.495(d).

(ii) The residual organic HAP content in each sample is to be determined using Methods specified in § 63.495(e).

(2) For each grade, the owner or operator shall establish stripper operating

parameter levels that represent stripper operation during the residual organic HAP content determination in paragraph (e)(1) of this section. The stripper operating parameters shall include, at a minimum, temperature, pressure, steaming rates (for steam strippers), and some parameter that is indicative of residence time.

(3) After the initial determinations, an owner or operator may add a grade, with corresponding stripper parameter levels, using the procedures in paragraphs (e)(1) and (e)(2) of this section. The results of this determination shall be submitted in the next periodic report.

(4) An owner or operator complying with the residual organic HAP limitations in paragraphs (a)(1) through (3) of § 63.494 using stripping, and demonstrating compliance by stripper parameter monitoring, shall redetermine the residual organic HAP content for all affected grades whenever process changes are made. For the purposes of this section, a process change is any action that would reasonably be expected to impair the performance of the stripping operation. For the purposes of this section, examples of process changes may include changes in production capacity or production rate, or removal or addition of equipment. For purposes of this paragraph, process changes do not include: Process upsets; unintentional, temporary process changes; or changes that reduce the residual organic HAP content of the elastomer.

(f) [Reserved]

(g) *Parameter monitoring excursion definitions.* (1) With respect to storage vessels (where the applicable monitoring plan specifies continuous monitoring), continuous front-end process vents, aggregate batch vent streams, back-end process operations complying with § 63.494(a)(1) through (3) through the use of control or recovery devices, and process wastewater streams, an excursion means any of the three cases listed in paragraphs (g)(1)(i) through (g)(1)(iii) of this section.

(i) When the daily average value of one or more monitored parameters is above the maximum level or below the minimum level established for the given parameters.

(ii) When the period of control or recovery device operation, with the exception noted in paragraph (g)(1)(v) of this section, is 4 hours or greater in an operating day and monitoring data are insufficient, as defined in paragraph (g)(1)(iv) of this section, to constitute a valid hour of data for at least 75 percent of the operating hours.

(iii) When the period of control or recovery device operation, with the exception noted in paragraph (g)(1)(v) of this section, is less than 4 hours in an operating day and more than two of the hours during the period of operation do not constitute a valid hour of data due to insufficient monitoring data, as defined in paragraph (g)(1)(iv) of this section.

(iv) Monitoring data are insufficient to constitute a valid hour of data, as used in paragraphs (g)(1)(ii) and (g)(1)(iii) of this section, if measured values are unavailable for any of the 15-minute periods within the hour. For data compression systems approved under § 63.506(g)(3), monitoring data are insufficient to calculate a valid hour of data if there are less than four data measurements made during the hour.

(v) The periods listed in paragraphs (g)(1)(v)(A) through (g)(1)(v)(E) of this section are not considered to be part of the period of control or recovery device operation, for the purposes of paragraphs (g)(1)(i) and (g)(1)(iii) of this section.

(A) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments; or

(B) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(2) With respect to batch front-end process vents, an excursion means one of the two cases listed in paragraphs (g)(2)(i) and (g)(2)(ii) of this section. For a control device where multiple parameters are monitored, if one or more of the parameters meets the excursion criteria in either paragraph (g)(2)(i) or (g)(2)(ii) of this section, this is considered a single excursion for the control device. For each excursion, the owner

or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (i) of this section.

(i) When the batch cycle daily average value of one or more monitored parameters is above the maximum or below the minimum established level for the given parameters.

(1) When monitoring data are insufficient for an operating day. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the 15-minute periods when batch emission episodes selected to be controlled are being vented to the control device during the operating day, using the procedures specified in paragraphs (g)(2)(1)(A) through (g)(2)(1)(D) of this section.

(A) Determine the total amount of time during the operating day when batch emission episodes selected to be controlled are being vented to the control device.

(B) Subtract the time during the periods of monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments from the total amount of time determined in paragraph (g)(2)(1)(A) of this section, to obtain the operating time used to determine if monitoring data are insufficient.

(1) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments:

- (2) Start-ups;
- (3) Shutdowns; or
- (4) Malfunctions.

(C) Determine the total number of 15-minute periods in the operating time used to determine if monitoring data are insufficient, as was determined in accordance with paragraph (g)(2)(1)(B) of this section.

(D) If measured values are not available for at least 75 percent of the total number of 15-minute periods determined in paragraph (g)(2)(1)(C) of this section, the monitoring data are insufficient for the operating day.

(3) For storage vessels where the applicable monitoring plan does not specify continuous monitoring, an excursion is defined in paragraph (g)(3)(1) or (i) of this section, as applicable. For a control or recovery device where

multiple parameters are monitored, if one or more of the parameters meets the excursion criteria, this is considered a single excursion for the control or recovery device. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (i) of this section.

(1) If the monitoring plan specifies monitoring a parameter and recording its value at specific intervals (such as every 15 minutes or every hour), either of the cases listed in paragraph (g)(3)(1)(A) or (g)(3)(1)(B) of this section is considered a single excursion for the control device.

(A) When the average value of one or more parameters, averaged over the duration of the filling period for the storage vessel, is above the maximum level or below the minimum level established for the given parameters.

(B) When monitoring data are insufficient. Monitoring data shall be considered insufficient when measured values are not available for at least 75 percent of the specific intervals at which parameters are to be monitored and recorded, according to the storage vessel's monitoring plan, during the filling period for the storage vessel.

(i) If the monitoring plan does not specify monitoring a parameter and recording its value at specific intervals (for example, if the relevant operating requirement is to exchange a disposable carbon canister before expiration of its rated service life), the monitoring plan shall define an excursion in terms of the relevant operating requirement.

(h) *Excursion definitions for back-end operations complying through stripping.*

(1) With respect to back-end process operations complying through the use of stripping technology, and demonstrating compliance by sampling, an excursion means one of the two cases listed in paragraphs (b)(1)(i) and (h)(1)(i) of this section. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (i) of this section.

(i) When the monthly weighted average residual organic HAP content is above the applicable residual organic HAP limitation in § 63.494; or



(ii) When less than 75 percent of the samples required in 1 month are taken and analyzed in accordance with the provisions of § 63.495(b).

(2) With respect to back-end process operations complying through the use of stripping technology, and demonstrating compliance by stripper parameter monitoring, an excursion means one of the three cases listed in paragraphs (h)(2)(i), (h)(2)(ii), and (h)(2)(iii) of this section. For each excursion, the owner or operator shall be deemed out of compliance with the provisions of this subpart, except as provided in paragraph (i) of this section.

(i) When the monthly weighted average residual organic HAP content is above the applicable residual organic HAP limitation in § 63.494:

(ii) When an owner or operator fails to sample and analyze the organic HAP content of a sample for a grade with an hourly average stripper operating parameter value not in accordance with the established monitoring parameter levels for that parameter; or

(iii) When an owner or operator does not collect sufficient monitoring data for at least 75 percent of the grades or batches processed during a month. Stripper monitoring data are considered insufficient if monitoring parameters are obtained for less than 75 percent of the 15-minute periods during the processing of a grade, and a sample of that grade or batch is not taken and analyzed to determine the residual organic HAP content.

(1) *Excused excursions.* A number of excused excursions shall be allowed for each control or recovery device for each semiannual period. The number of excused excursions for each semiannual period is specified in paragraphs (i)(1) through (j)(6) of this section. This paragraph applies to affected sources required to submit Periodic Reports semiannually or quarterly. The first semiannual period is the 6-month period starting the date the Notification of Compliance Status is due.

(1) For the first semiannual period—six excused excursions.

(2) For the second semiannual period—five excused excursions.

(3) For the third semiannual period—four excused excursions.

(4) For the fourth semiannual period—three excused excursions.

(5) For the fifth semiannual period—two excused excursions.

(6) For the sixth and all subsequent semiannual periods—one excused excursion.

(j) *Excursion definition for back-end operations subject to § 63.494(a)(4).* An excursion means when the total mass of organic HAP emitted for any consecutive 12-month period divided by the total mass of elastomer produced during the 12-month period, determined in accordance with § 63.495(g), is greater than the applicable emission limitation, determined in accordance with § 63.494(a)(4)(i) through (iv) and submitted in accordance with § 63.499(f)(1).

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11547, Mar. 9, 1999; 65 FR 38074, June 19, 2000; 76 FR 22592, Apr. 21, 2011]

#### § 63.506 General recordkeeping and reporting provisions.

(a) *Data retention.* Unless otherwise specified in this subpart, the owner or operator of an affected source shall keep copies of all applicable records and reports required by this subpart for at least 5 years, as specified in paragraph (a)(1) of this section, with the exception listed in paragraph (a)(2) of this section.

(1) All applicable records shall be maintained in such a manner that they can be readily accessed. The most recent 6 months of records shall be retained on site or shall be accessible from a central location by computer or other means that provide access within 2 hours after a request. The remaining 4 and one-half years of records may be retained offsite. Records may be maintained in hard copy or computer-readable form including, but not limited to, on microfilm, computer, floppy disk, magnetic tape, or microfiche.

(2) If an owner or operator submits copies of reports to the appropriate EPA Regional Office, the owner or operator is not required to maintain copies of reports. If the EPA Regional Office has waived the requirement of § 63.10(a)(4)(i) for submittal of copies of reports, the owner or operator is not required to maintain copies of those reports.

(b) *Subpart A requirements.* The owner or operator of an affected source shall comply with the applicable record-keeping and reporting requirements in 40 CFR part 63, subpart A as specified in Table 1 of this subpart. These requirements include, but are not limited to, the requirements specified in paragraphs (b)(1) and (b)(2) of this section.

(1) *Malfunction records.* Each owner or operator of an affected source subject to this subpart shall maintain records of the occurrence and duration of each malfunction of operation (*i.e.*, process equipment), air pollution control equipment, or monitoring equipment. Each owner or operator shall maintain records of actions taken during periods of malfunction to minimize emissions in accordance with § 63.483(a)(1), including corrective actions to restore malfunctioning process and air pollution control and monitoring equipment to its normal or usual manner of operation.

(i) *Records of start-up, shutdown, and malfunction.* The owner or operator shall keep the records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(C) of this section.

(A) Records of the occurrence and duration of each start-up, shutdown, and malfunction of operation of process equipment or control devices or recovery devices or continuous monitoring systems used to comply with this subpart during which excess emissions (as defined in § 63.480(j)(4)) occur.

(B) For each start-up, shutdown, or malfunction during which excess emissions (as defined in § 63.480(j)(4)) occur, records reflecting whether the procedures specified in the affected source's start-up, shutdown, and malfunction plan were followed, and documentation of actions taken that are not consistent with the plan. For example, if a start-up, shutdown, and malfunction plan includes procedures for routing a control device to a backup control device, records shall be kept of whether the plan was followed. These records may take the form of a "checklist," or other form of recordkeeping that confirms conformance with the start-up, shutdown, and malfunction plan for the event.

(C) Records specified in paragraphs (b)(1)(i)(A) through (b)(1)(i)(B) of this

section are not required if they pertain solely to Group 2 emission points that are not included in an emissions average.

(ii) *Reports of start-up, shutdown, and malfunction.* For the purposes of this subpart, the semiannual start-up, shutdown, and malfunction reports shall be submitted on the same schedule as the Periodic Reports required under paragraph (e)(6) of this section instead of the schedule specified in § 63.10(d)(5)(1). The reports shall include the information specified in § 63.10(d)(5)(1).

(2) *Application for approval of construction or reconstruction.* For new affected sources, each owner or operator shall comply with the provisions in § 63.5 regarding construction and reconstruction, excluding the provisions specified in § 63.5(d)(1)(ii)(H), (d)(1)(iii), (d)(2), and (d)(3)(i).

(c) [Reserved]

(d) *Recordkeeping and documentation.* Owners or operators required to keep continuous records shall keep records as specified in paragraphs (d)(1) through (d)(7) of this section, unless an alternative recordkeeping system has been requested and approved as specified in paragraph (g) of this section, and except as provided in paragraph (h) of this section. If a monitoring plan for storage vessels pursuant to § 63.484(k) requires continuous records, the monitoring plan shall specify which provisions, if any, of paragraphs (d)(1) through (d)(7) of this section apply. As described in § 63.484(k), certain storage vessels are not required to keep continuous records as specified in this paragraph. Owners and operators of such storage vessels shall keep records as specified in the monitoring plan required by § 63.484(k). Paragraphs (d)(8) and (d)(9) of this section specify documentation requirements.

(1) The monitoring system shall measure data values at least once every 15 minutes.

(2) The owner or operator shall record either each measured data value or block average values for 1 hour or shorter periods calculated from all measured data values during each period. If values are measured more frequently than once per minute, a single value for each minute may be used to calculate the hourly (or shorter period)

block average instead of all measured values. Owners or operators of batch front-end process vents shall record each measured data value.

(3) Daily average (or batch cycle daily average) values of each continuously monitored parameter shall be calculated for each operating day as specified in paragraphs (d)(3)(i) through (d)(3)(ii) of this section, except as specified in paragraphs (d)(6) and (d)(7) of this section.

(i) The daily average value or batch cycle daily average shall be calculated as the average of all parameter values recorded during the operating day, except as specified in paragraph (d)(7) of this section. For batch front-end process vents, as specified in § 63.491(e)(2)(i), only parameter values measured during those batch emission episodes, or portions thereof, in the batch cycle that the owner or operator has chosen to control shall be used to calculate the average. The calculated average shall cover a 24-hour period if operation is continuous, or the number of hours of operation per operating day if operation is not continuous.

(ii) The operating day shall be the period that the owner or operator specifies in the operating permit or the Notification of Compliance Status for purposes of determining daily average values or batch cycle daily average values of monitored parameters.

(4)-(5) [Reserved]

(6) *Records required when all recorded values are within the established limits.* If all recorded values for a monitored parameter during an operating day are above the minimum level or below the maximum level established in the Notification of Compliance Status or operating permit, the owner or operator may record that all values were above the minimum level or below the maximum level rather than calculating and recording a daily average (or batch cycle daily average) for that operating day.

(7) Monitoring data recorded during periods identified in paragraphs (d)(7)(i) and (ii) of this section shall not be included in any average computed under this subpart. Records shall be kept of the times and durations of all such periods and any other periods during process or control device or recov-

ery device operation when monitors are not operating.

(i) Monitoring system breakdowns, repairs, calibration checks, and zero (low-level) and high-level adjustments; or

(ii) Periods of non-operation of the affected source (or portion thereof), resulting in cessation of the emissions to which the monitoring applies.

(8) For continuous monitoring systems used to comply with this subpart, records documenting the completion of calibration checks, and records documenting the maintenance of continuous monitoring systems that are specified in the manufacturer's instructions or that are specified in other written procedures that provide adequate assurance that the equipment would reasonably be expected to monitor accurately.

(9) The owner or operator of an affected source granted a waiver under § 63.10(f) shall maintain the information, if any, specified by the Administrator as a condition of the waiver of recordkeeping or reporting requirements.

(e) *Reporting and notification.* In addition to the reports and notifications required by subpart A, as specified in Table 1 of this subpart, the owner or operator of an affected source shall prepare and submit the reports listed in paragraphs (e)(3) through (e)(8) of this section, as applicable. All reports required by this subpart, and the schedule for their submittal, are listed in Table 9 of this subpart.

(1) Owners and operators shall not be in violation of the reporting requirements of this subpart for failing to submit information required to be included in a specified report if the owner or operator meets the requirements in paragraphs (e)(1)(i) through (e)(1)(iii) of this section. Examples of circumstances where this paragraph may apply include information related to newly-added equipment or emission points, changes in the process, changes in equipment required or utilized for compliance with the requirements of this subpart, or changes in methods or equipment for monitoring, recordkeeping, or reporting.

(i) The information was not known in time for inclusion in the report specified by this subpart;

(ii) The owner or operator has been diligent in obtaining the information; and

(iii) The owner or operator submits a report according to the provisions of paragraphs (e)(1)(ii)(A) through (e)(1)(ii)(C) of this section.

(A) If this subpart expressly provides for supplements to the report in which the information is required, the owner or operator shall submit the information as a supplement to that report. The information shall be submitted no later than 60 days after it is obtained, unless otherwise specified in this subpart.

(B) If this subpart does not expressly provide for supplements, but the owner or operator must submit a request for revision of an operating permit pursuant to part 70 or part 71, due to circumstances to which the information pertains, the owner or operator shall submit the information with the request for revision to the operating permit.

(C) In any case not addressed by paragraph (e)(1)(ii)(A) or (e)(1)(ii)(B) of this section, the owner or operator shall submit the information with the first Periodic Report, as required by this subpart, which has a submission deadline at least 60 days after the information is obtained.

(2) All reports required under this subpart shall be sent to the Administrator at the appropriate address listed in § 63.13. If acceptable to both the Administrator and the owner or operator of a source, reports may be submitted on electronic media.

(3) *Precompliance Report.* Owners or operators of affected sources requesting an extension for compliance; requesting approval to use alternative monitoring parameters, alternative continuous monitoring and recordkeeping, or alternative controls; requesting approval to use engineering assessment to estimate emissions from a batch emissions episode, as described in § 63.488(b)(6)(i); wishing to establish parameter monitoring levels according to the procedures contained in § 63.505(c) or (d); shall submit a Precompliance Report according to the

schedule described in paragraph (e)(3)(i) of this section. The Precompliance Report shall contain the information specified in paragraphs (e)(3)(ii) through (vii) of this section, as appropriate.

(i) *Submittal dates.* The Precompliance Report shall be submitted to the Administrator no later than December 19, 2000. If a Precompliance Report was submitted prior to June 19, 2000 and no changes need to be made to that Precompliance Report, the owner or operator shall re-submit the earlier report or submit notification that the previously submitted report is still valid. Unless the Administrator objects to a request submitted in the Precompliance Report within 45 days after its receipt, the request shall be deemed approved. For new affected sources, the Precompliance Report shall be submitted to the Administrator with the application for approval of construction or reconstruction required in paragraph (b)(2) of this section. Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(3)(ix) of this section.

(ii) A request for an extension for compliance, as specified in § 63.481(e), may be submitted in the Precompliance Report. The request for a compliance extension shall include the data outlined in § 63.6(i)(6)(i)(A), (B), and (D), as required in § 63.481(e)(1).

(iii) The alternative monitoring parameter information required in paragraph (f) of this section shall be submitted in the Precompliance Report if, for any emission point, the owner or operator of an affected source seeks to comply through the use of a control technique other than those for which monitoring parameters are specified in this subpart or in subpart G of this part, or seeks to comply by monitoring a different parameter than those specified in this subpart or in subpart G of this part.

(iv) If the affected source seeks to comply using alternative continuous monitoring and recordkeeping as specified in paragraph (g) of this section, the owner or operator shall submit a request for approval in the Precompliance Report.

(v) The owner or operator shall report the intent to use alternative controls to comply with the provisions of this subpart in the Precompliance Report. The Administrator may deem alternative controls to be equivalent to the controls required by the standard, under the procedures outlined in § 63.6(g).

(vi) If a request for approval to use engineering assessment to estimate emissions from a batch emissions episode, as described in § 63.488(b)(6)(i)(C) is being made, the information required by § 63.488(b)(6)(iii)(B) shall be submitted in the Precompliance Report.

(vii) If an owner or operator establishes parameter monitoring levels according to the procedures contained in § 63.505(c) or (d), the following information shall be submitted in the Precompliance Report:

(A) Identification of which procedures (i.e., § 63.505(c) or (d)) are to be used; and

(B) A description of how the parameter monitoring level is to be established. If the procedures in § 63.505(c) are to be used, a description of how performance test data will be used shall be included.

(viii) [Reserved]

(ix) Supplements to the Precompliance Report may be submitted as specified in paragraph (e)(3)(ix)(A), or (e)(3)(ix)(B) of this section. Unless the Administrator objects to a request submitted in a supplement to the Precompliance Report within 45 days after its receipt, the request shall be deemed approved.

(A) Supplements to the Precompliance Report may be submitted to clarify or modify information previously submitted.

(B) Supplements to the Precompliance Report may be submitted to request approval to use alternative monitoring parameters, as specified in paragraph (e)(3)(iii) of this section; to use alternative continuous monitoring and recordkeeping, as specified in paragraph (e)(3)(iv) of this section; to use alternative controls, as specified in paragraph (e)(3)(v) of this section; to use engineering assessment to estimate emissions from a batch emissions episode, as specified in para-

graph (e)(3)(vi) of this section; or to establish parameter monitoring levels according to the procedures contained in § 63.505(c) or (d), as specified in paragraph (e)(3)(vii) of this section.

(4) *Emissions Averaging Plan.* For all existing affected sources using emissions averaging, an Emissions Averaging Plan shall be submitted for approval according to the schedule and procedures described in paragraph (e)(4)(i) of this section. The Emissions Averaging Plan shall contain the information specified in paragraph (e)(4)(ii) of this section, unless the information required in paragraph (e)(4)(ii) of this section is submitted with an operating permit application. An owner or operator of an affected source who submits an operating permit application instead of an Emissions Averaging Plan shall submit the information specified in paragraph (e)(8) of this section. In addition, a supplement to the Emissions Averaging Plan, as required under paragraph (e)(4)(iii) of this section, is to be submitted whenever additional alternative controls or operating scenarios may be used to comply with this subpart. Updates to the Emissions Averaging Plan shall be submitted in accordance with paragraph (e)(4)(iv) of this section.

(i) *Submittal and approval.* The Emissions Averaging Plan shall be submitted no later than September 19, 2000, and is subject to Administrator approval. If an Emissions Averaging Plan was submitted prior to June 19, 2000 and no changes need to be made to that Emissions Averaging Plan, the owner or operator shall re-submit the earlier plan or submit notification that the previously submitted plan is still valid. The Administrator shall determine within 120 days whether the Emissions Averaging Plan submitted 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.

(ii) *Information required.* The Emissions Averaging Plan shall contain the

information listed in paragraphs (e)(4)(1)(A) through (e)(4)(1)(N) of this section for all emission points included in an emissions average.

(A) The required information shall include the identification of all emission points and process back-end operations in the planned emissions average and, where applicable, notation of whether each storage vessel, continuous front-end process vent, batch front-end process vent, aggregate batch vents stream, and process wastewater stream is a Group 1 or Group 2 emission point, as defined in § 63.482 or as designated under § 63.503(c)(2).

(B) The required information shall include the projected emission debits and credits for each emission point and the sum for the emission points involved in the average calculated according to § 63.503. The projected credits shall be greater than or equal to the projected debits, as required under § 63.503(e)(3).

(C) The required information shall include the specific control technology or pollution prevention measure that will be used for each emission point included in the average and date of application or expected date of application.

(D) The required information shall include the specific identification of each emission point affected by a pollution prevention measure. To be considered a pollution prevention measure, the criteria in § 63.503(j)(1) shall be met. If the same pollution prevention measure reduces or eliminates emissions from multiple emission points in the average, the owner or operator shall identify each of these emission points.

(E) The required information shall include a statement that the compliance demonstration, monitoring, inspection, recordkeeping, and reporting provisions in § 63.503(m), (n), and (o) that are applicable to each emission point in the emissions average will be implemented beginning on or before the date of compliance.

(F) The required information shall include documentation of the data listed in paragraphs (e)(4)(1)(F)(1) through (e)(4)(1)(F)(5) of this section for each storage vessel and continuous front-end process vent included in the average.

(1) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2. Where a TRE index value is used for continuous front-end process vent group determination, the estimated or measured values of the parameters used in the TRE equation in § 63.115(d) and the resulting TRE index value shall be submitted.

(2) The required documentation shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.503(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported in an update to the Emissions Averaging Plan, as required by paragraph (e)(4)(1v)(B)(2) of this section.

(3) The required documentation shall include the estimated percent reduction if a control technology achieving a lower percent reduction than the efficiency of the applicable reference control technology or standard is or will be applied to the emission point.

(4) The required documentation shall include the anticipated nominal efficiency if a control technology achieving a greater percent emission reduction than the efficiency of the reference control technology is or will be applied to the emission point. The procedures in § 63.503(i) shall be followed to apply for a nominal efficiency, and the report specified in paragraph (e)(7)(ii) of this section shall be submitted with the Emissions Averaging Plan as specified in paragraph (e)(7)(1)(A) of this section.

(5) The required documentation shall include the monitoring plan specified in § 63.122(b), to include the information specified in § 63.120(d)(2)(i) and in either § 63.120(d)(2)(ii) or (d)(2)(iii) for each storage vessel controlled with a closed-vent system using a control device other than a flare.

(G) The information specified in paragraph (f) of this section shall be included in the Emissions Averaging Plan for:

(1) Each continuous front-end process vent subject to § 63.485 controlled by a

pollution prevention measure or control technique for which monitoring parameters or inspection procedures are not specified in § 63.114; and

(2) Each storage vessel controlled by pollution prevention or a control technique other than an internal or external floating roof or a closed vent system with a control device.

(H) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(H)(1) through (e)(4)(ii)(H)(4) of this section for each process wastewater stream included in the average.

(1) The required documentation shall include the data used to determine whether the wastewater stream is a Group 1 or Group 2 wastewater stream.

(2) The required documentation shall include the estimated values of all parameters needed for input to the wastewater emission credit and debit calculations in § 63.503(g)(6) and (h)(5). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv)(B)(2) of this section.

(3) The required documentation shall include the estimated percent reduction if:

(i) A control technology that achieves an emission reduction less than or equal to the emission reduction that would otherwise have been achieved by a steam stripper designed to the specifications found in § 63.138(g) is or will be applied to the wastewater stream, or

(ii) A control technology achieving less than or equal to 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes, or

(iii) A pollution prevention measure is or will be applied.

(4) The required documentation shall include the anticipated nominal efficiency if the owner or operator plans to apply for a nominal efficiency under § 63.503(i). A nominal efficiency shall be applied for if:

(i) A control technology that achieves an emission reduction greater than the emission reduction that would have been achieved by a steam stripper

designed to the specifications found in § 63.138(g), is or will be applied to the wastewater stream; or

(ii) A control technology achieving greater than 95 percent emission reduction is or will be applied to the vapor stream(s) vented and collected from the treatment processes.

(I) For each pollution prevention measure, treatment process, or control device used to reduce air emissions of organic HAP from wastewater and for which no monitoring parameters or inspection procedures are specified in § 63.143, the information specified in paragraph (f) of this section (Alternative Monitoring Parameters) shall be included in the Emissions Averaging Plan.

(J) The required information shall include documentation of the data required by estimated values of all parameters needed for input to the emission debit and credit calculations in § 63.503(g) and (h) for each process back-end operation included in an emissions average. These values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv)(B)(2) of this section.

(K) The required information shall include documentation of the information required by § 63.503(k). The documentation 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 Administrator, greater risk to human health or the environment than if the emission points were not included in an emissions average.

(L) The required information shall include documentation of the data listed in paragraphs (e)(4)(ii)(L)(1) through (e)(4)(ii)(L)(3) of this section for each batch front-end process vent and aggregate batch vent stream included in the average.

(1) The required documentation shall include the values of the parameters used to determine whether the emission point is Group 1 or Group 2.

(2) The required information shall include the estimated values of all parameters needed for input to the emission debit and credit calculations in

§ 63.503(g) and (h). These parameter values shall be specified in the affected source's Emissions Averaging Plan (or operating permit) as enforceable operating conditions. Changes to these parameters shall be reported as required by paragraph (e)(4)(iv) of this section.

(3) For batch front-end process vents, the required documentation shall include the estimated percent reduction for the batch cycle. For aggregate batch vent streams, the required documentation shall include the estimated percent reduction achieved on a continuous basis.

(M) For each pollution prevention measure or control device used to reduce air emissions of organic HAP from batch front-end process vents or batch vent streams and for which no monitoring parameters or inspection procedures are specified in § 63.489, the information specified in paragraph (f) of this section, Alternative Monitoring Parameters, shall be included in the Emissions Averaging Plan.

(N) The required information shall include documentation of the data required by § 63.503(k). The documentation shall demonstrate that the emissions from the emission points proposed to be included in the emissions average will not result in greater hazard or, at the option of the Administrator, greater risk to human health or the environment than if the emission points were not included in an emissions average.

(iii) *Supplement to Emissions Averaging Plan.* The owner or operator required to prepare an Emissions Averaging Plan under paragraph (e)(4) of this section shall also prepare a supplement to the Emissions Averaging Plan for any additional alternative controls or operating scenarios that may be used to achieve compliance.

(iv) *Updates to Emissions Averaging Plan.* The owner or operator of an affected source required to submit an Emissions Averaging Plan under paragraph (e)(4) of this section shall also submit written updates of the Emissions Averaging Plan to the Administrator for approval under the circumstances described in paragraphs (e)(4)(iv)(A) through (e)(4)(iv)(C) of this section unless the relevant information has been included and submitted in an

operating permit application or amendment.

(A) The owner or operator who plans to make a change listed in either paragraph (e)(4)(iv)(A)(1) or (e)(4)(iv)(A)(2) of this section shall submit an Emissions Averaging Plan update at least 120 days prior to making the change.

(1) An Emissions Averaging Plan update shall be submitted whenever an owner or operator elects to achieve compliance with the emissions averaging provisions in § 63.503 by using a control technique other than that specified in the Emissions Averaging Plan, or plans to monitor a different parameter or operate a control device in a manner other than that specified in the Emissions Averaging Plan.

(2) An Emissions Averaging Plan update shall be submitted whenever an emission point or an EPPU is added to an existing affected source and is planned to be included in an emissions average, or whenever an emission point not included in the emissions average described in the Emissions Averaging Plan is to be added to an emissions average. The information in paragraph (e)(4) of this section shall be updated to include the additional emission point.

(B) The owner or operator who has made a change as defined in paragraph (e)(4)(iv)(B)(1) or (e)(4)(iv)(B)(2) of this section shall submit an Emissions Averaging Plan update within 90 days after the information regarding the change is known to the affected source. The update may be submitted in the next quarterly periodic report if the change is made after the date the Notification of Compliance Status is due.

(1) An Emissions Averaging Plan update shall be submitted whenever a process change is made such that the group status of any emission point in an emissions average changes.

(2) An Emissions Averaging Plan update shall be submitted whenever a value of a parameter in the emission credit or debit equations in § 63.503(g) or (h) changes such that it is below the minimum or above the maximum established level specified in the Emissions Averaging Plan and causes a decrease in the projected credits or an increase in the projected debits.

(C) The Administrator shall approve or request changes to the Emissions



Averaging Plan update within 120 days of receipt of sufficient information regarding the change for emission points included in emissions averages.

(5) *Notification of Compliance Status.* For existing and new affected sources, a Notification of Compliance Status shall be submitted. For equipment leaks subject to § 63.502, the owner or operator shall submit the information required in § 63.182(c) in the Notification of Compliance Status within 150 days after the first applicable compliance date for equipment leaks in the affected source, and an update shall be provided in the first Periodic Report that is due at least 150 days after each subsequent applicable compliance date for equipment leaks in the affected source. For all other emission points, including heat exchange systems, the Notification of Compliance Status shall contain the information listed in paragraphs (e)(5)(i) through (e)(5)(xii) of this section, as applicable, and shall be submitted no later than 150 days after the compliance dates specified in this subpart.

(1) The results of any emission point group determinations, process section applicability determinations, performance tests, inspections, any other information used to demonstrate compliance, values of monitored parameters established during performance tests, and any other information required to be included in the Notification of Compliance Status under §§ 63.122 and 63.484 for storage vessels, § 63.117 for continuous front-end process vents, § 63.492 for batch front-end process vents, § 63.499 for back-end process operations, § 63.146 for process wastewater, and § 63.503 for emission points included in an emissions average. In addition, the owner or operator of an affected source shall comply with paragraphs (e)(5)(i)(A) and (e)(5)(i)(B) of this section.

(A) For performance tests, group determinations, and process section applicability determinations that are based on measurements, the Notification of Compliance Status shall include one complete test report, as described in paragraph (e)(5)(i)(B) of this section, for each test method used for a particular kind of emission point. For additional tests performed for the same

kind of emission point using the same method, the results and any other information, from the test report, that is requested on a case-by-case basis by the Administrator shall be submitted, but a complete test report is not required.

(B) A complete test report shall include a brief process description, sampling site description, description of sampling and analysis procedures and any modifications to standard procedures, quality assurance procedures, record of operating conditions during the test, record of preparation of standards, record of calibrations, raw data sheets for field sampling, raw data sheets for field and laboratory analyses, documentation of calculations, and any other information required by the test method.

(ii) For each monitored parameter for which a maximum or minimum level is required to be established under § 63.114(e) and § 63.485(k) for continuous front-end process vents, § 63.489 for batch front-end process vents and aggregate batch vent streams, § 63.497 for back-end process operations, § 63.143(f) for process wastewater, § 63.503(m) for emission points in emissions averages, paragraph (e)(8) of this section, or paragraph (f) of this section, the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(E) of this section shall be submitted in the Notification of Compliance Status, unless this information has been established and provided in the operating permit application. Further, as described in § 63.484(k), for those storage vessels for which the monitoring plan required by § 63.484(k) specifies compliance with the provisions of § 63.505, the owner or operator shall provide the information specified in paragraphs (e)(5)(ii)(A) through (e)(5)(ii)(D) of this section for each monitoring parameter, unless this information has been established and provided in the operating permit application. For those storage vessels for which the monitoring plan required by § 63.484(k) does not require compliance with the provisions of § 63.505, the owner or operator shall provide the information specified in § 63.120(d)(3) as part of the Notification of Compliance Status, unless this information has

been established and provided in the operating permit application.

(A) The required information shall include the specific maximum or minimum level of the monitored parameter(s) for each emission point.

(B) The required information shall include the rationale for the specific maximum or minimum level for each parameter for each emission point, including any data and calculations used to develop the level and a description of why the level indicates proper operation of the control device.

(C) The required information shall include a definition of the affected source's operating day, as specified in paragraph (d)(3)(ii) of this section, for purposes of determining daily average values of monitored parameters.

(D) For batch front-end process vents, the required information shall include a definition of each batch cycle that requires the control of one or more batch emission episodes during the cycle, as specified in §63.490(c)(2) and 63.505(b)(3)(iii).

(E) The required information shall include a definition of the affected source's operating month for the purposes of determining monthly average values of residual organic HAP.

(iii) For emission points included in an emissions average, the Notification of Compliance Status shall contain the values of all parameters needed for input to the emission credit and debit equations in §63.503(g) and (h), calculated or measured according to the procedures in §63.503(g) and (h), and the resulting calculation of credits and debits for the first quarter of the year. The first quarter begins on the compliance date specified.

(iv) [Reserved]

(v) The determination of applicability for flexible operation units as specified in §63.480(f).

(vi) The parameter monitoring levels for flexible operation units, and the basis on which these levels were selected, or a demonstration that these levels are appropriate at all times, as specified in §63.480(f)(7).

(vii) The results for each predominant use determination made under §63.480(g), for storage vessels assigned to an affected source subject to this subpart.

(viii) The results for each predominant use determination made under §63.480(h) for recovery operations equipment assigned to an affected source subject to this subpart.

(ix) For owners and operators of Group 2 batch front-end process vents establishing a batch mass input limitation, as specified in §63.490(f), the affected source's operating year for purposes of determining compliance with the batch mass input limitation.

(x) If any emission point is subject to this subpart and to other standards as specified in §63.481(k), and if the provisions of §63.481(k) allow the owner or operator to choose which testing, monitoring, reporting, and recordkeeping provisions will be followed, then the Notification of Compliance Status shall indicate which rule's requirements will be followed for testing, monitoring, reporting, and recordkeeping.

(xi) An owner or operator who transfers a Group 1 wastewater stream or residual removed from a Group 1 wastewater stream for treatment pursuant to §63.132(g) shall include in the Notification of Compliance Status the name and location of the transferee and a description of the Group 1 wastewater stream or residual sent to the treatment facility.

(xii) An owner or operator complying with paragraph (h)(1) of this section shall notify the Administrator of the election to comply with paragraph (h)(1) of this section as part of the Notification of Compliance Status, or as part of the appropriate Periodic Report, as specified in paragraph (e)(6)(ix) of this section.

(6) *Periodic Reports.* For existing and new affected sources, the owner or operator shall submit Periodic Reports as specified in paragraphs (e)(6)(i) through (c)(6)(xii) of this section. In addition, for equipment leaks subject to §63.502, the owner or operator shall submit the information specified in §63.182(d) under the conditions listed in §63.182(d), and for heat exchange systems subject to §63.502(n), the owner or operator shall submit the information specified in §63.104(f)(2) as part of the

Periodic Report required by this paragraph (e)(6). Section § 63.505 shall govern the use of monitoring data to determine compliance for Group 1 emission points and for Group 1 and Group 2 emission points included in emissions averages with the following exception: As discussed in § 63.484(k), for storage vessels to which the provisions of § 63.505 do not apply, as specified in the monitoring plan required by § 63.120(d)(2), the owner or operator is required to comply with the requirements set out in the monitoring plan, and monitoring records may be used to determine compliance.

(1) Except as specified in paragraphs (e)(6)(xi) and (e)(6)(xii) of this section, a report containing the information in paragraph (e)(6)(ii) of this section or paragraphs (e)(6)(iii) through (e)(6)(x) of this section, as appropriate, shall be submitted semiannually no later than 60 days after the end of each 6-month period. The first report shall be submitted no later than 240 days after the date the Notification of Compliance Status is due and shall cover the 6-month period beginning on the date the Notification of Compliance Status is due.

(ii) If none of the compliance exceptions in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period, the Periodic Report required by paragraph (e)(6)(i) of this section shall be a statement that there were no compliance exceptions as described in this paragraph for the 6-month period covered by that report and that none of the activities specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section occurred during the 6-month period covered by that report.

(iii) For an owner or operator of an affected source complying with the provisions of §§ 63.484 through 63.501 for any emission point, Periodic Reports shall include:

(A) All information specified in § 63.122(a)(4) for storage vessels, §§ 63.117(a)(3) and 63.118(f) and 63.485(s)(5) for continuous front-end process vents, § 63.492 for batch front-end process vents and aggregate batch vent streams, § 63.499 for back-end process operations, § 63.104(f)(2) for heat ex-

change systems, and §§ 63.146(c) through 63.146(g) for process wastewater.

(B) The daily average values or batch cycle daily average values of monitored parameters for all excursions, as defined in § 63.505(g) and § 63.505(h). For excursions caused by lack of monitoring data, the start-time and duration of periods when monitoring data were not collected shall be specified.

(C) [Reserved]

(D) The information in paragraphs (e)(6)(iii)(D)(1) through (e)(6)(iii)(D)(5) of this section, as applicable:

(1) Any supplements to the Emissions Averaging Plan, as required in paragraph (e)(4)(iii) of this section:

(2) Notification if a process change is made such that the group status of any emission point changes from Group 2 to Group 1. The owner or operator is not required to submit a notification of a process change if that process change caused the group status of an emission point to change from Group 1 to Group 2. However, until the owner or operator notifies the Administrator that the group status of an emission point has changed from Group 1 to Group 2, the owner or operator is required to continue to comply with the Group 1 requirements for that emission point. This notification may be submitted at any time.

(3) Notification if one or more emission points (other than equipment leaks) or one or more EPPU is added to an affected source. The owner or operator shall submit the information contained in paragraphs (e)(6)(iii)(D)(3)(i) through (e)(6)(iii)(D)(3)(ii) of this section.

(i) A description of the addition to the affected source; and

(ii) Notification of the group status of the additional emission point or all emission points in the EPPU.

(4) Notification if a standard operating procedure, as defined in § 63.500(a)(2), is changed and the change has the potential for increasing the concentration of carbon disulfide in the crumb dryer exhaust. This notification shall also include test results of the carbon disulfide concentration resulting from the new standard operating procedure.

(5) For process wastewater streams sent for treatment pursuant to

§ 63.132(g), reports of changes in the identity of the treatment facility or transferee.

(E) The number, duration, and a brief description for each type of malfunction which occurred during the reporting period and which caused or may have caused any applicable emission limitation to be exceeded. The report must also include a description of actions taken by an owner or operator during a malfunction of an affected source to minimize emissions in accordance with § 63.483(a)(1), including actions taken to correct a malfunction.

(iv) For each batch front-end process vent with a batch mass input limitation, every second Periodic Report shall include the mass of HAP or material input to the batch unit operation during the 12-month period covered by the preceding and current Periodic Reports, and a statement of whether the batch front-end process vent was in or out of compliance with the batch mass input limitation.

(v) If any performance tests are reported in a Periodic Report, the following information shall be included:

(A) One complete test report shall be submitted for each test method used for a particular kind of emission point tested. A complete test report shall contain the information specified in paragraph (e)(5)(i)(B) of this section.

(B) For additional tests performed for the same kind of emission point using the same method, results and any other information, pertaining to the performance test, that is requested on a case-by-case basis by the Administrator shall be submitted, but a complete test report is not required.

(vi) Notification of a change in the primary product of an EPPU, in accordance with the provisions in § 63.480(f). This includes a change in primary product from one elastomer product to either another elastomer product or to a non-elastomer product.

(vii) The results for each change made to a predominant use determination made under § 63.480(g) for a storage vessel that is assigned to an affected source subject to this subpart after the change.

(viii) The results for each change made to a predominant use determination made under § 63.480(h) for recovery

operations equipment assigned to an affected source subject to this subpart after the change.

(ix) An owner or operator complying with paragraph (h)(1) of this section shall notify the Administrator of the election to comply with paragraph (h)(1) of this section as part of the Periodic Report or as part of the Notification of Compliance Status as specified in paragraph (e)(5)(xi) of this section.

(x) An owner or operator electing not to retain daily average or batch cycle daily average values under paragraph (h)(2) of this section shall notify the Administrator as specified in paragraph (h)(2)(i) of this section.

(xi) The owner or operator of an affected source shall submit quarterly reports for all emission points included in an emissions average as specified in paragraphs (e)(6)(xi)(A) through (e)(6)(xi)(C) of this section.

(A) The quarterly reports shall be submitted no later than 60 days after the end of each quarter. The first report shall be submitted with the Notification of Compliance Status no later than 150 days after the compliance date.

(B) The quarterly reports shall include the information specified in paragraphs (e)(6)(xi)(B)(1) through (e)(6)(xi)(B)(7) of this section for all emission points included in an emissions average.

(1) The credits and debits calculated each month during the quarter:

(2) A demonstration that debits calculated for the quarter are not more than 1.30 times the credits calculated for the quarter, as required under § 63.503(e)(4):

(3) The values of any inputs to the debit and credit equations in § 63.503(g) and (h) that change from month to month during the quarter or that have changed since the previous quarter:

(4) Results of any performance tests conducted during the reporting period including one complete report for each test method used for a particular kind of emission point as described in paragraph (e)(6)(v) of this section:

(5) Reports of daily average values or batch cycle daily averages of monitored parameters for excursions as defined in § 63.505(g) or (h):

(6) For excursions caused by lack of monitoring data, the duration of periods when monitoring data were not collected shall be specified; and

(7) Any other information the affected source is required to report under the operating permit or Emissions Averaging Plan for the affected source.

(C) Every fourth quarterly report shall include the following:

(1) A demonstration that annual credits are greater than or equal to annual debits as required by § 63.503(e)(3); and

(2) A certification of compliance with all the emissions averaging provisions in § 63.503.

(xii) The owner or operator of an affected source shall submit quarterly reports for particular emission points and process sections not included in an emissions average as specified in paragraphs (e)(6)(xii)(A) through (e)(6)(xii)(D) of this section.

(A) The owner or operator of an affected source shall submit quarterly reports for a period of 1 year for an emission point or process section that is not included in an emissions average if:

(1) A control or recovery device for a particular emission point or process section has more excursions, as defined in § 63.505(g) or § 63.505(h), than the number of excused excursions allowed under § 63.505(i) for a semiannual reporting period; or

(2) The Administrator requests that the owner or operator submit quarterly reports for the emission point or process section.

(B) The quarterly reports shall include all information specified in paragraphs (e)(6)(iii) through (e)(6)(ix) of this section, as applicable to the emission point or process section for which quarterly reporting is required under paragraph (e)(6)(xii)(A) of this section. Information applicable to other emission points within the affected source shall be submitted in the semiannual reports required under paragraph (e)(6)(i) of this section.

(C) Quarterly reports shall be submitted no later than 60 days after the end of each quarter.

(D) After quarterly reports have been submitted for an emission point for 1 year without more excursions occur-

ring (during that year) than the number of excused excursions allowed under § 63.505(i), the owner or operator may return to semiannual reporting for the emission point or process section.

(7) *Other reports.* Other reports shall be submitted as specified in paragraphs (e)(7)(i) through (e)(7)(v) of this section.

(i) For storage vessels, the notifications of inspections required by § 63.484 shall be submitted, as specified in § 63.122(h)(1) and (h)(2).

(ii) For owners or operators of affected sources required to request approval for a nominal control efficiency for use in calculating credits for an emissions average, the information specified in § 63.503(i) shall be submitted, as specified in paragraph (e)(7)(ii)(A) or (e)(7)(ii)(B) of this section, as appropriate.

(A) If use of a nominal control efficiency is part of the initial Emissions Averaging Plan described in paragraph (e)(4)(ii) of this section, the information shall be submitted with the Emissions Averaging Plan.

(B) If an owner or operator elects to use a nominal control efficiency after submittal of the initial Emissions Averaging Plan as described in paragraph (e)(4)(ii) of this section, the information shall be submitted at the discretion of the owner or operator.

(iii) For back-end process operations using a control or recovery device to comply with §§ 63.493 through 63.500, the compliance redetermination report required by § 63.499(d) shall be submitted within 180 days after the process change.

(iv) When the conditions of §§ 63.480(f)(3)(iii), (f)(9), or 63.480(f)(10)(iii) are met, reports of changes to the primary product for an EPPU or process unit, as required by §§ 63.480(f)(3)(iii), 63.480(f)(9), or 63.480(f)(10)(iii)(C), respectively, shall be submitted.

(v) Owners or operators of EPPU or emission points (other than equipment leak components subject to § 63.502) that are subject to § 63.480(i)(1) or (i)(2) shall submit a report as specified in paragraphs (e)(7)(v)(A) and (B) of this section.

(A) Reports shall include:

(1) A description of the process change or addition, as appropriate;

(2) The planned start-up date and the appropriate compliance date, according to § 63.480(i)(1) or (2);

(3) Identification of the group status of emission points (except equipment leak components subject to the requirements in § 63.502) specified in paragraphs (e)(7)(v)(A)(3)(i) through (iii) of this section, as applicable.

(i) All the emission points in the added EPPU, as described in § 63.480(i)(1).

(ii) All the emission points in an affected source designated as a new affected source under § 63.480(i)(2)(1).

(iii) All the added or created emission points as described in § 63.480(i)(2)(ii) or (1)(2)(iii).

(4) If the owner or operator wishes to request approval to use alternative monitoring parameters, alternative continuous monitoring or record-keeping, alternative controls, engineering assessment to estimate emissions from a batch emissions episode, or wishes to establish parameter monitoring levels according to the procedures contained in § 63.505(c) or (d), a Precompliance Report shall be submitted in accordance with paragraph (e)(7)(v)(B) of this section.

(B) Reports shall be submitted as specified in paragraphs (e)(7)(v)(B)(1) through (e)(7)(v)(B)(3) of this section, as appropriate.

(1) Owners or operators of an added EPPU subject to § 63.480(i)(1) shall submit a report no later than 180 days prior to the compliance date for the EPPU.

(2) Owners or operators of an affected source designated as a new affected source under § 63.480(i)(2)(1) shall submit a report no later than 180 days prior to the compliance date for the affected source.

(3) Owners and operators of any emission point (other than equipment leak components subject to § 63.502) subject to § 63.480(i)(2)(ii) or (1)(2)(iii) shall submit a report no later than 180 days prior to the compliance date for those emission points.

(8) *Operating permit application.* An owner or operator who submits an operating permit application instead of an Emissions Averaging Plan or a

Precompliance Report shall include the following information with the operating permit application:

(1) The information specified in paragraph (e)(4) of this section for points included in an emissions average; and

(ii) The information specified in paragraph (e)(3) of this section, Precompliance Report, as applicable.

(f) *Alternative monitoring parameters.* The owner or operator of an affected source who has been directed by any section of this subpart, or any section of another subpart referenced by this subpart, that expressly references this paragraph (f) or § 63.151(f) to set unique monitoring parameters, or who requests approval to monitor a different parameter than those listed in § 63.484 for storage vessels, § 63.114 for continuous front-end process vents, § 63.489 for batch front-end process vents and aggregate batch vent streams, § 63.497 for back-end process operations, or § 63.143 for process wastewater shall submit the information specified in paragraphs (f)(1) through (f)(3) of this section in the Precompliance Report, as required by paragraph (e)(3) of this section. The owner or operator shall retain for a period of 5 years each record required by paragraphs (f)(1) through (f)(3) of this section.

(1) The required information shall include a description of the parameter(s) to be monitored to ensure the recovery device, control device, or pollution prevention measure is operated in conformance with its design and achieves the specified emission limit, percent reduction, or nominal efficiency, and an explanation of the criteria used to select the parameter(s).

(2) The required information shall include a description of the methods and procedures that will be used to demonstrate that the parameter indicates proper operation, the schedule for this demonstration, and a statement that the owner or operator will establish a level for the monitored parameter as part of the Notification of Compliance Status report required in paragraph (e)(5) of this section, unless this information has already been included in the operating permit application.

(3) The required information shall include a description of the proposed

monitoring, recordkeeping, and reporting system, to include the frequency and content of monitoring, recordkeeping, and reporting. Further, the rationale for the proposed monitoring, recordkeeping, and reporting system shall be included if either condition in paragraph (f)(3)(i) or (f)(3)(ii) of this section is met:

(i) If monitoring and recordkeeping is not continuous, or

(ii) If reports of daily average values will not be included in Periodic Reports when the monitored parameter value is above the maximum level or below the minimum level as established in the operating permit or the Notification of Compliance Status.

(g) *Alternative continuous monitoring and recordkeeping.* An owner or operator choosing not to implement the continuous parameter operating and recordkeeping provisions listed in §63.485 for continuous front-end process vents, §63.486 for batch front-end process vents and aggregate batch vent streams, §63.493 for back-end process operations, and §63.501 for process wastewater, may instead request approval to use alternative continuous monitoring and recordkeeping provisions according to the procedures specified in paragraphs (g)(1) through (g)(4) of this section. Requests shall be submitted in the Precompliance Report as specified in paragraph (e)(3)(iv) of this section, if not already included in the operating permit application, and shall contain the information specified in paragraphs (g)(2)(ii) and (g)(3)(ii) of this section, as applicable.

(1) The provisions in §63.8(f)(5)(i) shall govern the review and approval of requests.

(2) An owner or operator of an affected source that does not have an automated monitoring and recording system capable of measuring parameter values at least once every 15 minutes and that does not generate continuous records may request approval to use a nonautomated system with less frequent monitoring, in accordance with paragraphs (g)(2)(i) and (g)(2)(ii) of this section.

(i) The requested system shall include manual reading and recording of the value of the relevant operating parameter no less frequently than once

per hour. Daily average or batch cycle daily average values shall be calculated from these hourly values and recorded.

(ii) The request shall contain:

(A) A description of the planned monitoring and recordkeeping system;

(B) Documentation that the affected source does not have an automated monitoring and recording system;

(C) Justification for requesting an alternative monitoring and recordkeeping system; and

(D) Demonstration to the Administrator's satisfaction that the proposed monitoring frequency is sufficient to represent control or recovery device operating conditions, considering typical variability of the specific process and control or recovery device operating parameter being monitored.

(3) An owner or operator may request approval to use an automated data compression recording system that does not record monitored operating parameter values at a set frequency, but that records all values that meet set criteria for variation from previously recorded values, in accordance with paragraphs (g)(3)(i) and (g)(3)(ii) of this section.

(1) The requested system shall be designed to:

(A) Measure the operating parameter value at least once during every 15 minute period;

(B) Except for the monitoring of batch front-end process vents, record at least four values each hour during periods of operation;

(C) Record the date and time when monitors are turned off or on;

(D) Recognize unchanging data that may indicate the monitor is not functioning properly, alert the operator, and record the incident;

(E) Calculate daily average or batch cycle daily average values of the monitored operating parameter based on all measured data; and

(F) If the daily average is not an excursion, as defined in §63.505 (g) or (h), the data for that operating day may be converted to hourly average values and the four or more individual records for each hour in the operating day may be discarded.

(ii) The request shall contain:

(A) A description of the monitoring system and data compression recording system, including the criteria used to determine which monitored values are recorded and retained;

(B) The method for calculating daily averages and batch cycle daily averages; and

(C) A demonstration that the system meets all criteria in paragraph (g)(3)(i) of this section.

(4) An owner or operator may request approval to use other alternative monitoring systems according to the procedures specified in § 63.8(f)(4).

(h) *Reduced recordkeeping program.* For any parameter with respect to any item of equipment, the owner or operator may implement the recordkeeping requirements in paragraph (h)(1) or (h)(2) of this section as alternatives to the continuous operating parameter monitoring and recordkeeping provisions that would otherwise apply under this subpart. The owner or operator shall retain for a period of 5 years each record required by paragraph (h)(1) or (h)(2) of this section, except as otherwise provided in paragraph (h)(1)(vi)(D) of this section.

(1) The owner or operator may retain only the daily average or the batch cycle daily average value, and is not required to retain more frequent monitored operating parameter values, for a monitored parameter with respect to an item of equipment, if the requirements of paragraphs (h)(1)(i) through (h)(1)(vi) of this section are met. An owner or operator electing to comply with the requirements of paragraph (h)(1) of this section shall notify the Administrator in the Notification of Compliance Status as specified in paragraph (e)(5)(xii) of this section, or, if the Notification of Compliance Status has already been submitted, in the Periodic Report immediately preceding implementation of the requirements of paragraph (h)(1) of this section, as specified in paragraph (e)(6)(ix) of this section.

(i) The monitoring system is capable of detecting unrealistic or impossible data during periods of normal operation (e.g., a temperature reading of -200 °C on a boiler), and will alert the operator by alarm or other means. The owner or operator shall record the oc-

currence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(ii) The monitoring system generates, updated at least hourly throughout each operating day, a running average of the monitoring values that have been obtained during that operating day, and the capability to observe this running average is readily available to the Administrator on-site during the operating day. The owner or operator shall record the occurrence of any period meeting the criteria in paragraphs (h)(1)(ii)(A) through (h)(1)(ii)(C) of this section. All instances in an operating day constitute a single occurrence.

(A) The running average is above the maximum or below the minimum established limits;

(B) The running average is based on at least six one-hour average values; and

(C) The running average reflects a period of normal operation.

(iii) The monitoring system is capable of detecting unchanging data during periods of normal operation, except in circumstances where the presence of unchanging data is the expected operating condition based on past experience (e.g., pH in some scrubbers), and will alert the operator by alarm or other means. The owner or operator shall record the occurrence. All instances of the alarm or other alert in an operating day constitute a single occurrence.

(iv) The monitoring system will alert the owner or operator by an alarm or other means, if the running average parameter value calculated under paragraph (h)(1)(ii) of this section reaches a set point that is appropriately related to the established limit for the parameter that is being monitored.

(v) The owner or operator shall verify the proper functioning of the monitoring system, including its ability to comply with the requirements of paragraph (h)(1) of this section, at the times specified in paragraphs (h)(1)(v)(A) through (h)(1)(v)(C) of this section. The owner or operator shall document that the required verifications occurred.

(A) Upon initial installation.



(B) Annually after initial installation.

(C) After any change to the programming or equipment constituting the monitoring system, which might reasonably be expected to alter the monitoring system's ability to comply with the requirements of this section.

(vi) The owner or operator shall retain the records identified in paragraphs (h)(1)(vi)(A) through (h)(1)(vi)(D) of this section.

(A) Identification of each parameter, for each item of equipment, for which the owner or operator has elected to comply with the requirements of paragraph (h) of this section.

(B) A description of the applicable monitoring system(s), and how compliance will be achieved with each requirement of paragraphs (h)(1)(i) through (h)(1)(v) of this section. The description shall identify the location and format (e.g., on-line storage, log entries) for each required record. If the description changes, the owner or operator shall retain both the current and the most recent superseded description. The description, and the most recent superseded description, shall be retained as provided in paragraph (a) of this section, except as provided in paragraph (h)(1)(vi)(D) of this section.

(C) A description, and the date, of any change to the monitoring system that would reasonably be expected to impair its ability to comply with the requirements of paragraph (h)(1) of this section.

(D) Owners and operators subject to paragraph (h)(1)(vi)(B) of this section shall retain the current description of the monitoring system as long as the description is current. The current description shall, at all times, be retained on-site or be accessible from a central location by computer or other means that provides access within 2 hours after a request. The owner or operator shall retain all superseded descriptions for at least 5 years after the date of their creation. Superseded descriptions shall be retained on-site (or accessible from a central location by computer or other means that provides access within 2 hours after a request) for at least 6 months after their creation. Thereafter, superseded descriptions may be stored off-site.

(2) If an owner or operator has elected to implement the requirements of paragraph (h)(1) of this section for a monitored parameter with respect to an item of equipment and a period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator is no longer required to record the daily average or batch cycle daily average value, for any operating day when the daily average or batch cycle daily average value is less than the maximum, or greater than the minimum established limit. With approval by the Administrator, monitoring data generated prior to the compliance date of this subpart shall be credited toward the period of 6 consecutive months, if the parameter limit and the monitoring accomplished during the period prior to the compliance date was required and/or approved by the Administrator.

(1) If the owner or operator elects not to retain the daily average or batch cycle daily average values, the owner or operator shall notify the Administrator in the next Periodic Report as specified in paragraph (e)(6)(x) of this section. The notification shall identify the parameter and unit of equipment.

(i) If, on any operating day after the owner or operator has ceased recording daily average or batch cycle daily average values as provided in paragraph (h)(2) of this section, there is an excursion as defined in paragraph (h)(2)(iv) of this section, the owner or operator shall immediately resume retaining the daily average or batch cycle daily average value for each operating day and shall notify the Administrator in the next Periodic Report. The owner or operator shall continue to retain each daily average or batch cycle daily average value until another period of 6 consecutive months has passed without an excursion as defined in paragraph (h)(2)(iv) of this section.

(ii) The owner or operator shall retain the records specified in paragraphs (h)(1)(i) through (ii) of this section, for the duration specified in paragraph (h) of this section. For any calendar week, if compliance with paragraphs (h)(1)(i) through (ii) of this section does not result in retention of a record of at least one occurrence or measured parameter

value, the owner or operator shall record and retain at least one parameter value during a period of normal operation.

(iv) For the purposes of paragraph (h) of this section, an excursion means that the daily average or batch cycle daily average value of monitoring data for a parameter is greater than the maximum, or less than the minimum established value, except as provided in paragraphs (h)(2)(iv)(A) and (h)(2)(iv)(B) of this section.

(A) [Reserved]

(B) An excused excursion, as described in § 63.505(i), shall not be considered an excursion for the purposes of paragraph (h)(2) of this section.

(i)(1) As of January 1, 2012, and within 60 days after the date of completing each performance test, as defined in § 63.2 and as required in this subpart, you must submit performance test data, except opacity data, electronically to EPA's Central Data Exchange by using the Electronic Reporting Tool (ERT) (see <http://www.epa.gov/ttn/chiefer/ert/tool.html>) or other compatible electronic spreadsheet. Only data collected using test methods compatible with ERT are subject to this requirement to be submitted electronically into EPA's WebFIRE database.

(2) All reports required by this subpart not subject to the requirements in paragraphs (i)(1) of this section must be sent to the Administrator at the appropriate address listed in § 63.13. If acceptable to both the Administrator and the owner or operator of a source, these reports may be submitted on electronic media. The Administrator retains the right to require submittal of reports subject to paragraph (i)(1) of this section in paper format.

[62 FR 46925, Sept. 5, 1996, as amended at 64 FR 11547, Mar. 9, 1999; 65 FR 38076, June 19, 2000; 66 FR 36928, July 16, 2001; 71 FR 20457, Apr. 20, 2006; 76 FR 22593, Apr. 21, 2011]

**§ 63.507 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 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 agencies are as specified in paragraphs (c)(1) through (4) of this section.

(1) Approval of alternatives to the requirements in §§ 63.480 through 63.481, 63.483(a) through (c), 63.484, 63.485(a) through (k), (m) through (s), (u), 63.486 through 63.487, 63.488(a), (b)(1) through (4), (5)(iv) through (v), (6) through (7), (c) through (i), 63.493 through 63.494, 63.500(a)(1) through (3), (b), 63.501, 63.502(a) through (f), (i), (k) through (m), and 63.503. 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 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 37349, June 23, 2003]

TABLE 1 TO SUBPART U OF PART 63—APPLICABILITY OF GENERAL PROVISIONS TO SUBPART U AFFECTED SOURCES

Reference	Applies to subpart U	Explanation
§ 63.1(a)(1)	Yes	§ 63.482 specifies definitions in addition to or that supersede definitions in § 63.2.
§ 63.1(a)(2)	Yes	
§ 63.1(a)(3)	Yes	§ 63.481(f) through (k) and § 63.160(b) identify those standards which may apply in addition to the requirements of subparts U and H of this part, and specify how compliance shall be achieved.
§ 63.1(a)(4)	Yes	Subpart U (this table) specifies the applicability of each paragraph in subpart A to subpart U.
§ 63.1(a)(5)	No	[Reserved.]
§ 63.1(a)(6)–(8)	Yes	
§ 63.1(a)(9)	No	[Reserved.]
§ 63.1(a)(10)	Yes	
§ 63.1(a)(11)	Yes	
§ 63.1(a)(12)–(14)	Yes	
§ 63.1(b)(1)	No	§ 63.480(a) contains specific applicability criteria
§ 63.1(b)(2)	Yes	
§ 63.1(b)(3)	No	§ 63.480(b) provides documentation requirements for EPPUs not considered affected sources.
§ 63.1(c)(1)	Yes	Subpart U (this table) specifies the applicability of each paragraph in subpart A to subpart U.
§ 63.1(c)(2)	No	Area sources are not subject to subpart U.
§ 63.1(c)(3)	No	[Reserved.]
§ 63.1(c)(4)	Yes	
§ 63.1(c)(5)	Yes	Except that affected sources are not required to submit notifications that are not required by subpart U.
§ 63.1(d)	No	[Reserved.]
§ 63.1(e)	Yes	
§ 63.2	Yes	§ 63.482 specifies those subpart A definitions that apply to subpart U.
§ 63.3	Yes	
§ 63.4(a)(1)–(3)	Yes	
§ 63.4(a)(4)	No	[Reserved.]
§ 63.4(a)(5)	Yes	
§ 63.4(b)	Yes	
§ 63.4(c)	Yes	
§ 63.5(a)(1)	Yes	Except the terms "source" and "stationary source" should be interpreted as having the same meaning as "affected source".
§ 63.5(a)(2)	Yes	
§ 63.5(b)(1)	Yes	Except § 63.480(l) defines when construction or reconstruction is subject to new source standards.
§ 63.5(b)(2)	No	[Reserved.]
§ 63.5(b)(3)	Yes	
§ 63.5(b)(4)	Yes	Except that the Initial Notification and § 63.9(b) requirements do not apply.
§ 63.5(b)(5)	Yes	
§ 63.5(b)(6)	Yes	Except that § 63.480(j) defines when construction or reconstruction is subject to the new source standards.
§ 63.5(c)	No	[Reserved.]
§ 63.5(d)(1)(i)	Yes	Except that the references to the Initial Notification and § 63.9(b)(5) do not apply.
§ 63.5(d)(1)(ii)	No	Except that § 63.5(d)(1)(ii)(1) does not apply.
§ 63.5(d)(2)	No	§ 63.506(a)(5) and § 63.502(f) specify Notification of Compliance Status requirements.
§ 63.5(d)(3)	Yes	Except § 63.5(d)(3)(ii) does not apply, and equipment leaks subject to § 63.502 are exempt
§ 63.5(d)(4)	Yes	
§ 63.5(e)	Yes	
§ 63.5(f)(1)	Yes	
§ 63.5(f)(2)	Yes	Except that where § 63.9(b)(2) is referred to, the owner or operator need not comply.
§ 63.6(a)	Yes	
§ 63.6(b)(1)	No	The dates specified in § 63.481(b) apply, instead.
§ 63.6(b)(2)	No	
§ 63.6(b)(3)	No	
§ 63.6(b)(4)	No	
§ 63.6(b)(5)	No	
§ 63.6(b)(6)	No	[Reserved.]
§ 63.6(b)(7)	No	
§ 63.6(c)(1)	Yes	§ 63.481 specifies the compliance date.

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Reference	Applies to subpart U	Explanation
§ 63.6(c)(2)	No.	[Reserved].
§ 63.6(c)(3)	No	[Reserved].
§ 63.6(c)(4)	No	[Reserved].
§ 63.6(c)(5)	Yes.	
§ 63.6(d)	No	[Reserved].
§ 63.6(e)(1)(i)	No	See § 63.483(a)(1) for general duty requirement. Any cross reference to § 63.6(e)(1)(i) in any other general provision incorporated by reference shall be treated as a cross reference to § 63.483(e)(1).
§ 63.6(e)(1)(ii)	No.	
§ 63.6(e)(1)(iii)	Yes.	
§ 63.6(e)(2)	No	[Reserved]
§ 63.6(e)(3)	No.	
§ 63.6(f)(1)	No.	
§ 63.6(f)(2)	Yes	Except 63.7(c), as referred to in § 63.6(f)(2)(ii)(D) does not apply, and except that § 63.6(f)(2)(ii) does not apply to equipment leaks subject to § 63.502.
§ 63.6(g)(3)	Yes.	
§ 63.6(g)	Yes.	
§ 63.6(h)	No	Subpart U does not require opacity and visible emission standards.
§ 63.6(i)(1)	Yes.	
§ 63.6(i)(2)	Yes.	
§ 63.6(i)(3)	Yes.	
§ 63.6(i)(4)(i)(A)	Yes.	
§ 63.6(i)(4)(i)(B)	No	Dates are specified in § 63.481(a) and § 63.506(e)(3)(i).
§ 63.6(i)(4)(ii)	No.	
§ 63.6(i)(5)-(14)	Yes.	
§ 63.6(i)(15)	No	[Reserved].
§ 63.6(i)(16)	Yes.	
§ 63.6(j)	Yes.	
§ 63.7(a)(1)	Yes.	
§ 63.7(a)(2)	No.	§ 63.506(e)(5) specifies the submittal dates of performance test results for all emission points except equipment leaks; for equipment leaks, compliance demonstration results are reported in the Periodic Reports.
§ 63.7(a)(3)	Yes.	
§ 63.7(b)	No	§ 63.504(a)(4) specifies notification requirements.
§ 63.7(c)	No	Except if the owner or operator chooses to submit an alternative nonopacity emission standard for approval under § 63.6(g).
§ 63.7(d)	Yes.	
§ 63.7(e)(1)	No	See § 63.504(a)(1). Any cross-reference to § 63.7(e)(1) in any other general provision incorporated by reference shall be treated as a cross-reference to § 63.504(a)(1).
§ 63.7(e)(2)	Yes.	
§ 63.7(e)(3)	No	Subpart U specifies requirements.
§ 63.7(e)(4)	Yes.	
§ 63.7(f)	Yes	Except that § 63.144(b)(5)(ii)(A) & (B) shall apply for process wastewater. Also, since a site specific test plan is not required, the notification deadline in § 63.7(f)(2)(i) shall be 60 days prior to the performance test, and in § 63.7(f)(3) approval or disapproval of the alternative test method shall not be tied to the site specific test plan.
§ 63.7(g)	Yes	Except that the requirements in § 63.506(e)(5) shall apply instead of references to the Notification of Compliance Status report in 63.9(h). In addition, equipment leaks subject to § 63.502 are not required to conduct performance tests.
§ 63.7(h)	Yes	Except § 63.7(h)(4)(ii) is not applicable, since the site-specific test plans in § 63.7(c)(2) are not required.
§ 63.8(a)(1)	Yes.	
§ 63.8(a)(2)	No.	
§ 63.8(a)(3)	No	[Reserved].
§ 63.8(a)(4)	Yes.	
§ 63.8(b)(1)	Yes.	
§ 63.8(b)(2)	No	Subpart U specifies locations to conduct monitoring.
§ 63.8(b)(3)	Yes.	
§ 63.8(c)(1)	Yes.	
§ 63.8(c)(1)(i)	Yes.	
§ 63.8(c)(1)(ii)	No	For all emission points except equipment leaks, comply with § 63.506(b)(1)(i)(B); for equipment leaks, comply with § 63.181(g)(2)(ii).
§ 63.8(c)(1)(iii)	Yes.	
§ 63.8(c)(2)	Yes.	
§ 63.8(c)(3)	Yes.	

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Reference	Applies to subpart U	Explanation
§ 63.8(c)(4)	No	§ 63.505 specifies monitoring frequency; not applicable to equipment leaks, because § 63.502 does not require continuous monitoring systems.
§ 63.8(c)(5)-(8)	No.	
§ 63.8(d)	No.	
§ 63.8(e)	No.	
§ 63.8(f)(1)-(3)	Yes.	
§ 63.8(f)(4)(i)	No	Timeframe for submitting request is specified in § 63.506(f) or (g); not applicable to equipment leaks, because § 63.502 (through reference to subpart H) specifies acceptable alternative methods.
§ 63.8(f)(4)(ii)	No	Contents of request are specified in § 63.506(f) or (g).
§ 63.8(f)(4)(iii)	No.	
§ 63.8(f)(5)(i)	Yes.	
§ 63.8(f)(5)(ii)	No.	
§ 63.8(f)(5)(iii)	Yes.	
§ 63.8(f)(6)	No	Subpart U does not require CEM's.
§ 63.8(g)	No	Data reduction procedures specified in § 63.506(d) and (h); not applicable to equipment leaks.
§ 63.9(a)	Yes.	
§ 63.9(b)	No	Subpart U does not require an initial notification
§ 63.9(c)	Yes.	
§ 63.9(d)	Yes.	
§ 63.9(e)	No	§ 63.504(a)(4) specifies notification deadline.
§ 63.9(f)	No	Subpart U does not require opacity and visible emission standards.
§ 63.9(g)	No.	
§ 63.9(h)	No	§ 63.506(e)(5) specifies Notification of Compliance Status requirements.
§ 63.9(i)	Yes.	
§ 63.9(j)	No.	
§ 63.10(e)	Yes.	
§ 63.10(b)(1)	No	§ 63.506(a) specifies record retention requirements.
§ 63.10(b)(2)	No	Subpart U specifies recordkeeping requirements.
§ 63.10(b)(3)	No	§ 63.480(b) requires documentation of sources that are not affected sources.
§ 63.10(c)	No	§ 63.506 specifies recordkeeping requirements.
§ 63.10(d)(1)	Yes.	
§ 63.10(d)(2)	No	§ 63.506(e)(5) specifies performance test reporting requirements; not applicable to equipment leaks.
§ 63.10(d)(3)	No	Subpart U does not require opacity and visible emission standards.
§ 63.10(d)(4)	Yes.	
§ 63.10(d)(5)(i)	No.	
§ 63.10(d)(5)(ii)	No.	
§ 63.10(e)	No	§ 63.506 specifies reporting requirements.
§ 63.10(f)	Yes.	
§ 63.11	Yes	§ 63.11(b) specifies requirements for flares used to comply with provisions of this subpart. § 63.504(c) contains the requirements to conduct compliance demonstrations for flares subject to this subpart. § 63.11(c), (d), and (e) specifies requirements for an alternative work practice for equipment leaks
§ 63.12	Yes	Except that the authority of § 63.503(i) and the authority of § 63.177 (for equipment leaks) will not be delegated to States.
§§ 63.13-63.15	Yes.	

<sup>a</sup> The plan and any records or reports of start-up, shutdown, and malfunction do not apply to Group 2 emission points unless they are included in an emissions average.

[66 FR 38928, July 16, 2001, as amended at 71 FR 20457, Apr. 20, 2006; 73 FR 78213, Dec. 22, 2008]

TABLE 2 TO SUBPART U OF PART 63—APPLICABILITY OF SUBPARTS F, G, & H OF THIS PART TO SUBPART U AFFECTED SOURCES

Reference	Applies to Subpart U	Comment	Applicable section of Subpart U
Subpart F.			
§ 63.100	No		
§ 63.101	Yes	Several definitions from § 63.101 are referenced in § 63.482	§ 63.482.
§§ 63.102-63.103	No		
§§ 63.104-63.105	Yes		§§ 63.501 and 63.502.
§§ 63.106-63.109	No		

Reference	Applies to Subpart U	Comment	Applicable section of Subpart U
<b>Subpart G:</b>			
§ 63.110 .....	No	Several definitions from § 63.111 reference in § 63.482.	§ 63.482.
§ 63.111 .....	Yes		
§ 63.112 .....	No	With the differences noted in § 63.485 (b) through § 63.485(k).	63.484.
§§ 63.113-63.118 .....	Yes		
§§ 63.119-63.123 .....	Yes	With the differences noted in § 63.484(c) through 63.484(s). [Reserved.]	
§§ 63.124-63.125 .....	No	[Reserved.]	§ 63.501.
§§ 63.126-63.130 .....	No		
§ 63.131 .....	Yes	With the differences noted in § 63.501(a)(1) through (19).	
§§ 63.133-63.147 .....	Yes	With the differences noted in §§ 63.484(c) through (s) and 63.501(a)(1) through (23).	§§ 63.484 and 63.501.
§§ 63.148-63.149 .....	Yes		
§ 63.150(a) through (f) .....	No		
§ 63.150(g)(1) and (2) .....	No		
§ 63.150(g)(3) .....	Yes		
§ 63.150(g)(4) .....	No		
§ 63.150(g)(5) .....	Yes		
§ 63.150(h)(1) and (2) .....	No		
§ 63.150(h)(3) .....	Yes		
§ 63.150(h)(4) .....	No		
§ 63.150(h)(5) .....	Yes		
§ 63.150(i) through (o) .....	No		
§§ 63.151-63.152 .....	No		
<b>Subpart H:</b>			
§§ 63.160-63.182 .....	Yes	Subpart U affected sources shall comply with all requirements of subpart H of this part, with the differences noted in § 63.502.	§ 63.502.

[66 FR 36928, July 16, 2001, as amended at 76 FR 22594, Apr. 21, 2011]

TABLE 3 TO SUBPART U OF PART 63—GROUP 1 STORAGE VESSELS AT EXISTING AFFECTED SOURCES

Vessel capacity (cubic meters)	Vapor pressure* (kilopascals)
75 scapacity <151 .....	≥13.1
151 scapacity .....	≥5.2

\* Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 4 TO SUBPART U OF PART 63—GROUP 1 STORAGE VESSELS AT NEW SOURCES

Vessel capacity (cubic meters)	Vapor Pressure* (kilopascals)
38 scapacity <151 .....	≥13.1
151 scapacity .....	≥0.7

\* Maximum true vapor pressure of total organic HAP at storage temperature.

TABLE 5 TO SUBPART U OF PART 63—KNOWN ORGANIC HAP EMITTED FROM THE PRODUCTION OF ELASTOMER PRODUCTS

[Known organic HAP emitted from the production of elastomer products]

Organic HAP/ Chemical name (CAS No.)	Elastomer product/subcategory										
	BR	EPI	EPR	HYP	NEO	NBL	NBR	PBR/ SBRs	PSR	SBL	SBRE
Acrylonitrile (107131) .....						X	X				
1,3 Butadiene (106990) .....						X	X	X		X	X
Carbon Disulfide .....						X	X	X		X	X

[Known organic HAP emitted from the production of elastomer products]

Organic HAP/ Chemical name (CAS No.)	Elastomer product/subcategory										
	BR	EPI	EPR	HYP	NEO	NBL	NBR	PBR/ SBRS	PSR	SBL	SBRE
Carbon Tetra- chloride (56235)				X							
Chlorobenzene (108907)				X							
Chloroform (67663)				X							
Chloroprene (126998)					X						
Epichlorohydrin (106898)		X									
Ethylbenzene (100414)	X									X	
Ethylene Dichloride (107062)									X		
Ethylene Oxide (75218)		X							X		
Formaldehyde (50000)		X							X		
Hexane (110643)	X		X					X			
Methanol (67561)	X							X			
Methyl Chloride (74873)	X			X							
Propylene Oxide (75569)		X									
Styrene (100425)								X		X	X
Toluene (106883)		X	X		X			X			
Xylenes (1330207)	X										
Xylene (m-) (106383)	X										
Xylene (o-) (85476)	X										
Xylene (p-) (106423)	X										

CAS No. = Chemical Abstract Service Number.  
 BR = Butyl Rubber.  
 EPI = Epichlorohydrin Rubber.  
 EPR = Ethylene Propylene Rubber.  
 HYP = Hypalon™.  
 NEO = Neoprene.  
 NBL = Nitrile Butadiene Latex.  
 NBR = Nitrile Butadiene Rubber.  
 PBR/SBRS = Polybutadiene and Styrene Butadiene Rubber by Solution.  
 PSR = Polysulfide Rubber.  
 SBL = Styrene Butadiene Latex.  
 SBRE = Styrene Butadiene Rubber by Emulsion.

[76 FR 22594, Apr. 21, 2011]

TABLE 6 TO SUBPART U OF PART 63—GROUP 1 BATCH FRONT-END PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS—MONITORING, RECORDKEEPING, AND REPORTING REQUIREMENTS

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Thermal incinerator	Firebox temperature <sup>a</sup>	1. Continuous records as specified in § 63.491(e)(1). <sup>b</sup> 2. Record and report the average firebox temperature measured during the performance test—NCS. <sup>c</sup> 3. Record the batch cycle daily average firebox temperature as specified in § 63.491(e)(2). 4. Report all batch cycle daily average temperatures that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR. <sup>d</sup>
Catalytic incinerator	Temperature upstream and downstream of the catalyst bed	1. Continuous records as specified in § 63.491(e)(1). <sup>b</sup>

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Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
<p>Boiler or process heater with a design heat input capacity less than 44 megawatts and where the batch front-end process vents or aggregate batch vent streams are "not" introduced with or used as the primary fuel.</p>	<p>Firebox temperature<sup>a</sup> .....</p>	<p>2. Record and report the average upstream and downstream temperatures and the average temperature difference across the catalyst bed measured during the performance test—NCS.<sup>c</sup></p> <p>3. Record the batch cycle daily average upstream temperature and temperature difference across catalyst bed as specified in § 63.491(a)(2).</p> <p>4. Report all batch cycle daily average upstream temperatures that are below the minimum upstream value established in the NCS or operating permit—PR.<sup>e,e</sup></p> <p>5. Reporting all batch cycle daily average temperature differences across the catalyst bed that are below the minimum difference established in the NCS or operating permit—PR.<sup>e,e</sup></p> <p>6. Report all instances when monitoring data are not collected.</p> <p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the average firebox temperature measured during the performance test—NCS.<sup>c</sup></p> <p>3. Record the batch cycle daily average firebox temperature as specified in § 63.491(e)(2).<sup>d</sup></p> <p>4. Report all batch cycle daily average temperatures that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>e,e</sup></p>
<p>Flare .....</p>	<p>Presence of a flame at the pilot light .....</p>	<p>1. Hourly records of whether the monitor was continuously operating during night batch emission episodes selected for control and whether a flame was continuously present at the pilot light during each hour.</p> <p>2. Record and report the presence of a flame at the pilot light over the full period of the compliance determination—NCS.<sup>c</sup></p> <p>3. Record the times and durations of all periods during batch emission episodes when all flames at the pilot light of a flare are absent or the monitor is not operating.</p> <p>4. Report the times and durations of all periods during batch emission episodes selected for control when all flames at the pilot light of a flare are absent—PR.<sup>d</sup></p>
<p>Scrubber for halogenated batch front-end process vents or aggregate batch vent streams (Note. Controlled by a combustion device other than a flare)</p>	<p>a pH of scrubber effluent, and .....</p>	<p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the average pH of the scrubber effluent measured during the performance test—NCS.<sup>c</sup></p> <p>3. Record the batch cycle daily average pH of the scrubber effluent as specified in § 63.491(e)(2).</p>



Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
Absorber <sup>1</sup> .....	<p>b. Scrubber liquid and gas flow rates (§ 63.489(b)(4)(ii)).</p> <p>a. Exit temperature of the absorbing liquid, and</p> <p>b. Exit specific gravity of the absorbing liquid</p>	<p>4. Report all batch cycle daily average pH values of the scrubber effluent that are below the minimum operating value established in the NCS or operating permit and all instances when insufficient monitoring data are collected—PR.<sup>4*</sup></p> <p>1. Records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the scrubber liquid/gas ratio averaged over the full period of the performance test—NCS.<sup>c</sup></p> <p>3. Record the batch cycle daily average scrubber liquid/gas ratio as specified in § 63.491(e)(2).</p> <p>4. Report all batch cycle daily average scrubber liquid/gas ratios that are below the minimum value established in the NCS or operating permit and all instances when insufficient monitoring data are collected—PR.<sup>4*</sup></p> <p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the average exit temperature of the absorbing liquid measured during the performance test—NCS.<sup>c</sup></p> <p>3. Record the batch cycle daily average exit temperature of the absorbing liquid as specified in § 63.491(e)(2) for each batch cycle.</p> <p>4. Report all the batch cycle daily average exit temperatures of the absorbing liquid that are above the maximum operating temperature established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>4*</sup></p> <p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the average exit specific gravity measured during the performance test—NCS.</p> <p>3. Record the batch cycle daily average exit specific gravity as specified in § 63.491(e)(2).</p> <p>4. Report all batch cycle daily average exit specific gravity values that are below the minimum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>4*</sup></p>
Condenser <sup>1</sup> .....	Exit (product side) temperature	<p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report the average exit temperature measured during the performance test—NCS.</p> <p>3. Record the batch cycle daily average exit temperature as specified in § 63.491(e)(2).</p> <p>4. Report all batch cycle daily average exit temperatures that are above the maximum operating value established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>4*</sup></p>
Carbon adsorber <sup>1</sup> .....	a. Total regeneration steam flow or nitrogen flow, or pressure gauge or absolute) during carbon bed regeneration cycle(s), and	<p>1. Record of total regeneration steam flow or nitrogen flow, or pressure for each carbon bed regeneration cycle.</p>

Control/recovery device	Parameter to be monitored	Recordkeeping and reporting requirements for monitored parameters
All control devices	<p>b. Temperature of the carbon bed after regeneration and within 15 minutes of completing any cooling cycle(s).</p> <p>a. Diversion to the atmosphere from the control device or</p> <p>b. Monthly inspections of sealed valves</p>	<p>2. Record and report the total regeneration steam flow or nitrogen flow, or pressure during each carbon bed regeneration cycle during the performance test—NCS.<sup>c</sup></p> <p>3. Report all carbon bed regeneration cycles when the total regeneration steam flow or nitrogen flow, or pressure is above the maximum value established in the NCS or operating permit—PR.<sup>d</sup></p> <p>1. Record the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s).</p> <p>2. Record and report the temperature of the carbon bed after each regeneration and within 15 minutes of completing any cooling cycle(s) measured during the performance test—NCS.<sup>c</sup></p> <p>3. Report all carbon bed regeneration cycles when the temperature of the carbon bed after regeneration, or within 15 minutes of completing any cooling cycle(s), is above the maximum value established in the NCS or operating permit—PR.<sup>d</sup></p> <p>1. Hourly records of whether the flow indicator was operating during batch emission episodes selected for control and whether a diversion was detected at any time during the hour, as specified in § 63.491(e)(3).</p> <p>2. Record and report the times of all periods during batch emission episodes selected for control when emissions are diverted through a bypass line, or the flow indicator is not operating—PR.<sup>d</sup></p> <p>1. Records that monthly inspections were performed as specified in § 63.491(e)(4)(i).</p> <p>2. Record and report all monthly inspections that show that valves are in the diverting position or that a seal has been broken—PR.<sup>d</sup></p>
Absorber, condenser, and carbon adsorber (as an alternative to the above).	Concentration level or reading indicated by an organic monitoring device at the outlet of the recovery device.	<p>1. Continuous records as specified in § 63.491(e)(1).<sup>b</sup></p> <p>2. Record and report average batch vent concentration level or reading measured during the performance test—NCS.</p> <p>3. Record the batch cycle daily average concentration level or reading as specified in § 63.491(e)(2).</p> <p>4. Report all batch cycle daily average concentration levels or readings that are above the maximum values established in the NCS or operating permit and all instances when monitoring data are not collected—PR.<sup>d</sup></p>

<sup>a</sup> Monitor may be installed in the firebox or in the duct work immediately downstream of the firebox before any substantial heat exchange is encountered.

<sup>b</sup> "Continuous records" is defined in § 63.111.

<sup>c</sup> NCS = Notification of Compliance Status described in § 63.506(e)(5).

<sup>d</sup> PR = Periodic Reports described in § 63.506(e)(6).

<sup>e</sup> The periodic reports shall include the duration of periods when monitoring data are not collected as specified in § 63.506(e)(6)(iii)(C).

<sup>f</sup> Alternatively, these devices may comply with the organic monitoring device provisions listed at the end of this table.

TABLE 7 TO SUBPART U OF PART 63—OPERATING PARAMETERS FOR WHICH MONITORING LEVELS ARE REQUIRED TO BE ESTABLISHED FOR CONTINUOUS AND BATCH FRONT-END PROCESS VENTS AND AGGREGATE BATCH VENT STREAMS

Control/recovery device	Parameters to be monitored	Established operating parameter(s)
Thermal incinerator .....	Firebox temperature .....	Minimum temperature.
Catalytic incinerator .....	Temperature upstream and downstream of the catalyst bed.	Minimum upstream temperature; and minimum temperature difference across the catalyst bed.
Boiler or process heater .....	Firebox temperature .....	Minimum temperature.
Scrubber for halogenated vents .....	pH of scrubber effluent; and scrubber liquid and gas flow rates. [§ 63.489(b)(4)(ii)] .....	Minimum pH; and minimum liquid/gas ratio.
Absorber .....	Exit temperature of the absorbing liquid; and exit specific gravity of the absorbing liquid.	Maximum temperature; and maximum specific gravity.
Condenser .....	Exit temperature .....	Maximum temperature.
Carbon adsorber .....	Total regeneration steam flow or nitrogen flow, or pressure (gauge or absolute) during carbon bed regeneration cycle; and temperature of the carbon bed after regeneration (and within 15 minutes of completing any cooling cycle(s)).	Maximum flow or pressure; and maximum temperature.
Other devices (or as an alternate to the above) <sup>b</sup> .	HAP concentration level or reading at outlet of device.	Maximum HAP concentration or reading.

<sup>a</sup>25 to 50 mm (absolute) is a common pressure level obtained by pressure swing absorbers.  
<sup>b</sup>Concentration is measured instead of an operating parameter.

[65 FR 38093, June 19, 2000]

TABLE 8 TO SUBPART U OF PART 63—SUMMARY OF COMPLIANCE ALTERNATIVE REQUIREMENTS FOR THE BACK-END PROCESS PROVISIONS

Compliance alternative	Parameter to be monitored	Requirements
Compliance Using Stripping Technology, Demonstrated through Periodic Sampling [§ 63.495(b)].	Residual organic HAP content in each sample of crumb or latex.	(1) If a stripper operated in batch mode is used, at least one representative sample is to be taken from every batch. (2) If a stripper operated in continuous mode is used, at least one representative sample is to be taken each operating day.
Compliance Using Stripping Technology, Demonstrated through Stripper Parameter Monitoring [§ 63.495(c)].	Quantity of Material (weight of latex or dry crumb rubber) represented by each sample. At a minimum, temperature, pressure, steaming rates (for steam strippers), and some parameter that is indicative of residence time.	(1) Acceptable methods of determining this quantity are production records, measurement of stream characteristics, and engineering calculations. (2) Establish stripper operating parameter levels for each grade in accordance with § 63.505(a). (3) Continuously monitor stripper operating parameters. (4) If hourly average parameters are outside of the established operating parameter levels, a crumb or latex sample shall be taken in accordance with § 63.495(c)(3)(ii).
Determining Compliance Using Control or Recovery Devices [§ 63.496].	Parameters to be monitored are described in Table 3 of subpart G of this part.	Comply with requirements listed in Table 3 of subpart G of this part, except for the requirements for halogenated vent stream scrubbers.

[65 FR 38093, June 19, 2000]

TABLE 9 TO SUBPART U OF PART 63—ROUTINE REPORTS REQUIRED BY THIS SUBPART

Reference	Description of report	Due Date
§ 63.506(b) and subpart A .....	Refer to § 63.506(b), Table 1 of this subpart, and to subpart A.	Refer to subpart A.

Reference	Description of report	Due Date
§ 63.506(e)(3)	Precompliance Report <sup>a</sup>	1. Existing affected sources: December 19, 2000. 2. New affected sources: with the application for approval of construction or reconstruction.
§ 63.506(e)(4)	Emissions Averaging Plan	September 19, 2000.
§ 63.506(e)(4)(iv)	Updates to Emissions Averaging Plan	120 days prior to making the change necessitating the update.
§ 63.506(e)(5)	Notification of Compliance Status <sup>b</sup>	Within 150 days after the compliance date.
§ 63.506(e)(6)	Periodic reports	Semiannually, no later than 60 days after the end of each 6-month period. See § 63.506(e)(6)(i) for the due date for this report.
§ 63.508(e)(6)(xi)	Quarterly reports Emissions Averaging.	No later than 60 days after the end of each quarter. First report is due with the Notification of Compliance Status.
§ 63.506(e)(6)(xii)	Quarterly reports upon request of the Administrator.	No later than 60 days after the end of each quarter.
§ 63.506(e)(7)(i)	Storage Vessels Notification of Inspection.	At least 30 days prior to the refilling of each storage vessel or the inspection of each storage vessel.
§ 63.506(e)(7)(ii)	Requests for Approval of a Nominal Control Efficiency for Use in Emissions Averaging.	Initial submittal is due with the Emissions Averaging Plan; later submittals are made at the discretion of the owner or operator as specified in § 63.506(e)(7)(ii)(B).
§ 63.506(e)(7)(iii)	Notification of Change in the Primary Product.	For notification under § 63.480(f)(3)(ii)—notification submittal date at the discretion of the owner or operator. <sup>c</sup> For notification under § 63.480(f)(4)(ii)—within 6 months of making the determination.

<sup>a</sup>There may be two versions of this report due at different times; one for equipment subject to § 63.502 and one for other emission points subject to this subpart.

<sup>b</sup>There will be two versions of this report due at different times; one for equipment subject to § 63.502 and one for other emission points subject to this subpart.

<sup>c</sup>Note that the EPPU remains subject to this subpart until the notification under § 63.480(f)(3)(i) is made.

[66 FR 36928, July 16, 2001]

**Subpart V [Reserved]**

**Subpart W—National Emission Standards for Hazardous Air Pollutants for Epoxy Resins Production and Non-Nylon Polyamides Production**

SOURCE: 60 FR 12676, Mar. 8, 1995, unless otherwise noted.

**§ 63.520 Applicability and designation of sources.**

The provisions of this subpart apply to all existing, new, and reconstructed manufacturers of basic liquid epoxy resins (BLR) and manufacturers of wet strength resins (WSR) that are located at a plant site that is a major source, as defined in section 112(a) of the Clean Air Act. Research and development facilities, as defined in § 63.522, are exempt from the provisions of this sub-

part. The affected source is also defined in § 63.522. If a change occurs to an existing source that does not constitute reconstruction then the additions have to meet the existing source requirements of the MACT standards. Any reconstruction of an existing source, or construction of a new source, must meet the new source standard. Affected sources are also subject to certain requirements of subpart A of this part, as specified in Table 1 of this subpart.

**§ 63.521 Compliance schedule.**

(a) Owners or operators of existing affected BLR and WSR sources shall comply with the applicable provisions of this subpart within 3 years of the promulgation date.

(b) New and reconstructed sources subject to this subpart shall be in compliance with the applicable provisions of this subpart upon startup.